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A cross-case analysis in two transforming middle level schools of the effects of school, adult, and student factors on the protective factors which promote resiliency

Lesley Kay Forsythe
Iowa State University

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Forsythe, Lesley Kay, Ph.D.

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U·M·I
300 N. Zeeb Rd.
Ann Arbor, MI 48106

A cross-case analysis in two transforming middle level schools of the effects of school, adult, and student factors on the protective factors which promote resiliency

by

Lesley Kay Forsythe

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This dissertation is dedicated to my parents: Dr. Richard H. and Charlotte L. Forsythe;

and to my children: Lesley Rebecca Simmering and Otto Jon Simmering.

Each, in his/her own way, has been the inspiration I needed to complete this task.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1. INTRODUCTION

The American education system is currently being challenged from within and from without to examine its policies and practices and to implement strategies that will result in students who are prepared to take an active and positive role in a life-long learning process. Attempts to transform schools are taking place within a context of a global economy and workplace transformation that demands a new set of knowledges and skills, some of which have not yet been discovered or defined. In addition, societal issues–such as poverty, dysfunctional families, substance abuse, and violence–interfere with learning for many children. The school is perceived to be part of the problem and, at the same time, is expected to be a significant part of the solution.

The Carnegie Council on Adolescent Development's (1989) report on educational experiences for young adolescents, Turning Points: Preparing American Youth for the 21st Century, asserts that many middle level schools are contributing to the problems experienced by this age group. "A volatile mismatch exists between the organization and curriculum of middle grade schools and the intellectual and emotional needs of young adolescents" (p. 8-9). The junior high school, first created around 1900, to be a transition between elementary school and high school, has evolved into a replica of the high school for younger students. The Carnegie Council attests that this model school is not developmentally appropriate for the 10-14 year old learner of today, not only because of the mini-high-school structure but also because the social setting for schools, as well as for students, is significantly different today than in 1900, or even 1950.

Too often the problems of students and, thus, schools are blamed on societal conditions with the implication that when those conditions are remedied the school problems will disappear. When educators accept this viewpoint, they tend to feel helpless to take action and respond as victims or to utilize intervention strategies that serve as band-aids to problems. The

changes in American society must be recognized and accepted as real and permanent by educators if those educators are to understand and meet the developmental needs of the students in middle level schools. Without an understanding of the students' needs, the educators will be unable to respond with proactive strategies that create an environment that engages students in the educational process and promotes those characteristics of resiliency that allow students to experience success even in adverse circumstances. An understanding of the social context within which American schools operate is necessary in order for schools to be ready to take action to create that environment.

The social milieu of the United States has changed and continues to change significantly. The demographics are shifting with traditional minority populations increasing and approaching a balance in numbers with the white population; in some school districts the population has shifted and the white non-Hispanic students are now the minority. The result of this shift is a larger lower socio-economic class and increased numbers of children living in poverty.

In addition, while use of illicit drugs has stabilized and even decreased in some instances, the use of alcohol continues to be a significant problem for adolescents, particularly in rural areas where alternative activities are scarce. Directly related to and influenced by alcohol use, sexual activity and teen pregnancies continue to increase. Teen suicide maintains its status as a major concern. Violence has become commonplace in many urban communities, and even in rural schools where it is more perception than reality, students report concern about weapons and violence in the schools.

The family, as the foundation of values within society, has also undergone significant changes. For a variety of reasons, the traditional family of the 1950's in which the father worked outside the home and the mother was responsible for the home and the nurturing of the children is no longer the norm. In 1985, this structure comprised only 7% of families with school-aged children, and is likely to be lower today, given the increase of women/mothers in

the workforce (Fuller, 1986). There is no norm for family structure today, and families might be comprised of two parents, both working outside the home; single parent (mother or father) working outside the home; blended families with children from previous marriages; unmarried parents living together; extended families with three or more generations living together; or any other combination of related or unrelated people living in the same dwelling. The result is less direct contact between children and adults in which the values of the family can be modeled and reinforced for the children.

The relationship between female-headed single-parent families and poverty is also cause for alarm with the divorce rate continuing at 50% and custody of school-aged children given to the mother in 90% of these cases (Hodgkinson, 1989). The average income for female-headed households is less than one-third that of married-couple households with children.

Communities also have lost the sense of bonding and opportunities for nurturing that existed for some in the past. With the increasingly transient workforce, fewer people become connected to their neighbors and fewer have extended family within commuting distance. That instability, coupled with the time constraints that working parents experience, also detracts from the sense of community and mutual responsibility for the children that would provide positive role models, appropriate feedback, intervention with inappropriate behavior, and reinforcement of positive social behaviors.

These changing conditions for young people were considered when the Carnegie Foundation undertook their study of promising practices in the education of young adolescents. The Carnegie Council on Adolescent Development published the report of that study, Turning Points: Preparing American Youth for the 21st Century, in 1989. In this report, schools for young adolescents are urged to consider the developmental needs of the 10 to 14 year old and to offer an educational program that is designed to facilitate growth and development to the highest potential. It is during these years of growth that young adolescents examine, select, and practice the values and beliefs that will guide their decisions and behavior in adulthood.

"Middle level schools...are potentially society's most powerful force to recapture millions of youth adrift, and help every young person thrive during early adolescence" (Carnegie Council on Adolescent Development, p. 8).

It is within this context of youth experiencing multiple risk factors that the school must attempt to be a positive and stabilizing influence in the lives of young adolescents. The guidelines for this role are suggested by the research on resiliency, defined as the ability to recover from adverse situations and circumstances in order to enjoy a healthy productive life. If the schools are to be the last bastion of hope for many early adolescents, then we must take measures to ensure that our schools do not add to the risk factors. However, removing risk factors within the school will not be enough when students must live in the total context of family, school, community, and peers. Thus, the schools must go beyond the removal of risk factors to an active attempt to provide protective factors that will promote resilience in all young people, and, in order for the protective factors to have impact on the students, they must be engaged in the educational processes and programs being employed by the school.

The implementation of the middle school philosophy and its accompanying practices, policies, and programs emanates from the use of child-centered, developmentally appropriate strategies for young adolescents. The middle school model is proposed as more effective than the junior high model in meeting the needs of the early adolescent as well as more likely to engage the early adolescent in the physical, psychosocial, and cognitive activities that promote growth (Manning, 1993b). Engaging students in the educational process is necessary to ensure their success in learning the knowledges and skills for successful life experiences.

In summary, it seems obvious that there is an urgency for the implementation of the middle school model that is implied in the model's role in promoting resiliency in young adolescents who are faced with the social circumstances existing in America today. If the early adolescent is to experience the protective factors that promote resiliency through the application

of the student-centered middle school concept, and its defined policies and practices; then the middle level school must implement that model wholly and successfully.

Statement of the Problem

Many middle level schools have been implementing various strategies that are congruent with the recommendations for the developmentally appropriate school for young adolescents. These strategies are purported to encourage students to become responsible for and take an active role in their own growth and development. Turning Points: Preparing American Youth for the 21st Century (Carnegie Council on Adolescent Development, 1989) provides eight recommendations for the middle level school aimed at minimizing the risk in which societal conditions place youth and developing the conditions in which youth can successfully grow into productive adults. These eight recommendations are founded on the body of research that documents the developmental needs of early adolescents and the impact of the recommended practices (or absence of those practices) on the growth and development of the 10-14 year old. While this extensive body of literature provides a sound research base for the implementation of the middle school concept, there is no body of research that documents the impact and influences of the policies and practices of the middle school concept in mitigating risk and promoting resiliency in young adolescents. Additionally, while there is a significant body of literature that establishes the protective factors within the social environment which promote resiliency, there is a need to determine the role of middle school concept in engaging students in the educational process such that they actually do experience the benefits of those protective factors.

The problem of this study was twofold: (1) to determine the influences and interactions between and among the policies and practices of the student-centered middle level school; the adult influences (teacher readiness, teacher engagement, and principal leadership); and the factors that influence student engagement (membership and authentic work); and (2) to

determine in what ways all those factors influence and enhance student engagement and the protective factors that promote resiliency in young adolescents.

Purpose of the Study

The primary purpose of this study was to examine the influences and interactions of the middle school structures, teacher readiness and engagement, principal leadership, and student engagement and resilience in two middle level schools. Two middle level schools were selected for this study as a result of their participation in a previous study that examined student-at-risk programs and readiness of teachers to meet the needs of at-risk students in rural schools. The two schools selected emerged from the original study as having programming for at-risk students that exceeded other middle level schools as well as a level of teacher readiness that was higher than other middle level schools in the original study.

A case study of each school provides a profile of the existing middle school programs, practices, and policies; a description of the level of engagement of students and staff; the existence and effectiveness of protective factors that promote resilience; a description of teacher engagement and principal leadership, and a description of the level of teacher readiness to meet the needs of all students. The case study analysis provides insight into the differences between the two schools and the reasons for those differences, as well as, understanding of the relationships between and among the theoretical concepts of the student-centered middle level school, student engagement and resiliency.

The specific purposes of the study include:

1. To identify and describe the existence of programs, policies, and practices of the student-centered middle school in each participating school. Structures that were examined include: (a) developmentally appropriate curriculum, instruction, and assessment; (b) learning teams of teachers and students; (c) core of common knowledge; (d) exploratory programs; (e) advisory and support programs; (f) co-curricular programs; (h) home/school

partnerships; (i) school/community partnerships; (j) flexible schedule; (k) staff specifically prepared to work with young adolescents; and (l) staff empowered to make decisions.

2. To determine the level of teacher engagement in each school as exemplified by: (a) engagement with the school as a social unit; (b) engagement with students as unique individuals;(c) engagement with academic achievement; and (d) engagement with the subject and body of knowledge being taught.
3. To determine the level of readiness (to meet the needs of all students) of the teachers of each school as defined by capacity, will, and sense of self-efficacy.
4. To determine the level of leadership of the building principals as operationalized by: (a) buffering teachers from outside intervention; (b) availability and participation in the daily routine; (c) delegating and empowering school staff; (d) confronting disengaged teachers; and (e) providing leadership through vision, values, and beliefs.
5. To determine, in each school, the pervasiveness of the factors that influence student engagement: (a) membership, which includes caring, success, personal support, fairness, and clarity of purpose; and (b) authentic work, which includes extrinsic rewards, intrinsic rewards, sense of ownership, connection to the "real world", and fun.
6. To identify, in each school, the level of engagement of students in the educational process as evidenced by the amount of participation in academic work, intensity of student concentration, enthusiasm and interest expressed, and the degree of care shown in completing work.
7. To determine, in each school, the level of ubiquity of the protective factors that promote resilience. These factors include: (a) opportunities for meaningful involvement; (b) high expectations; (c) skill building; and (d) caring and support.
8. To determine the relationships between and among the student-centered middle school structures, teacher engagement, principal leadership, teacher readiness, factors that

influence student engagement, student engagement, and the protective factors that promote resiliency.

Research Questions

The research questions provide the study with boundaries for investigation. More specifically, the research questions provide the theoretical and practical foundation for the qualitative interview and observation process. The research questions are related to the fundamental question of how the student-centered middle school policies, programs, and practices; engagement in the educational process; and resilience influence one another.

1. To what extent and how does each school exhibit the policies, procedures, and practices of the student-centered middle school?
2. What is the level of teacher engagement in each school, and how is engagement demonstrated by teachers in each school?
3. What is the level of teacher readiness to meet the needs of students in each school and how do teachers exemplify that readiness?
4. To what extent and how do building principals of each school demonstrate leadership?
5. To what extent and how are the factors that influence student engagement demonstrated in each school?
6. To what extent and how do students in each school exhibit engagement in the educational process?
7. To what extent and how are the protective factors that promote resiliency demonstrated in each school?
8. To what extent and how do the factors of the student-centered middle school structures, the adult influences (teacher engagement, teacher readiness, principal leadership), the factors that influence student engagement (membership and authentic work), student engagement, and the protective factors that promote resilience influence one another?

Assumptions

Assumptions related to the theoretical framework of this study include the following:

1. The policies, practices, and programs of the student-centered middle school offer the most developmentally appropriate educational opportunity for young adolescents. The student-centered middle school is a vision of a school that does not exist in its total state to the knowledge of this researcher.
2. Resilience is promoted in young adolescents through diminishing the effects of risk factors and increasing the prevalence of protective factors, specifically caring, high expectations, opportunities for meaningful participation, and skill building. Further, these protective factors can be provided by any one or combination of sources, including the family, community, peer group, individual, and school.
3. Student engagement is increased by meeting a basic need for competence through school membership and authentic work.
4. Teacher engagement is increased through the community and district environment of the school, the school culture, the leadership of the principal, and the structures of the school.
5. Teacher readiness to meet the needs of students is based on will, capacity, and self-efficacy.

Assumptions related to the methods and procedures of the study include the following:

1. The complexity of the relationships between and among the theoretical constructs of this study can best be answered through case study methodology utilizing primarily qualitative methods with quantitative methods used to triangulate the data related to student and teacher engagement and teacher readiness.
2. Teachers and students candidly and honestly respond to interview questions.
3. The Student Engagement Survey and Teacher Engagement Survey accurately measure engagement in the educational process.

4. The Teacher Readiness Survey accurately measures readiness to meet the needs of students in the classroom.
5. Observed behavior is purposive and expressive of deeper values and beliefs (Marshall & Rossman, 1989).
6. Interview of teachers and students and observation in classrooms can give valid information be be used for triangulation to determine the levels of student engagement, teacher engagement, teacher readiness, and principal leadership.

Delimitations of the Study

This research project involved a case study of two middle level schools in rural Iowa. Participation of school staff and students was voluntary with an attempt to recruit an accurate cross-section of the student population; this sample was neither purported nor intended to be a true random sample. A limited amount of time was available for the interview and observation process due to the research team limitations as well as the limitations imposed by the school schedule.

Based on the depth and breadth of previous research on resiliency, it was assumed that the protective factors identified in that literature do, in fact, promote resiliency in youth. Therefore, this study did not attempt to examine the student population of the case study schools to determine the level of resiliency within the students, but rather examined the school setting to determine the presence and prevalence of the protective factors.

Just as the context of this research was limited, the theoretical framework has constrictions due to the inability to examine all possible factors within the model. This study was narrowed to examination of the school setting and factors that exist within that setting. While it is accepted by the researcher that the influence of the family/parents, and community on resilience and on engagement are salient and, the resiliency research would indicate that they

have significant influence; it was not possible to include those elements in this study. In-depth examination of those concepts and their effect on this model are left for future study.

Definitions of Terms

The following definitions of terms used throughout this study are provided to increase clarity and understanding for the reader.

1. Developmentally appropriate - those practices within the school setting that are based on the social, emotional, moral, physical, and/or intellectual needs of the students in that school.
2. Student-centered middle school - a school for young adolescents, aged 10 - 14 years, that has implemented and institutionalized the developmentally appropriate practices identified through the research and literature on the middle level school.
3. Protective factors - those conditions within the community, family, school, or individual that mitigate risk and promote resilience in individuals.
4. Readiness - the capacity, will, and sense of self-efficacy needed to take action, in this study to meet the needs of all students.
5. Resiliency - the observed ability of a person to thrive and live a productive and successful life despite personal circumstances that mitigate normal growth and development, such as living in an alcoholic family, the child of a teen pregnancy, poverty, or chronic illness of a primary caretaker.
6. Risk factors - those life conditions that mitigate normal growth and development, such as living in an alcoholic family, the child of a teen pregnancy, poverty, chronic illness of a primary caretaker, or unhealthy choices kids make.
7. Student engagement - "a student's psychological investment in and effort directed toward learning, understanding, or mastering the knowledge, skills, or crafts that academic work is intended to promote" (Newmann, 1992, p. 12).

8. Teacher engagement - "a teacher's psychological investment in and effort toward teaching the knowledge, skills, and crafts he or she wishes students to master" (Newmann, 1992, p. 120).

CHAPTER 2. LITERATURE REVIEW

The theoretical framework of this study involves the relationship among four concepts: (1) the student-centered middle level school, (2) resiliency and at-riskness of students, (3) student engagement in the educational process, and (4) adult influences which includes teacher engagement, teacher readiness, and principal leadership. The review of the literature related to this study addresses each of these four concepts in depth and explores the theoretical and philosophical similarities and differences among them. The review begins with literature on the middle school concept which includes a description of both middle level students and the best educational practices for middle level schools. The second section provides an in-depth analysis of current research and theory related to students at risk with a focus on resilience and the protective factors which promote the adoption of positive coping strategies. The concept of student engagement in the educational process is the third section. Fourth, teacher and administrator influences on the model are discussed including, specifically, teacher engagement in the educational process, teacher readiness to meet the needs of all students, and administrator leadership. Following the review of the literature related to each of the theoretical constructs, the theoretical model for this study is explained. In addition, a research framework is proposed which identifies the proposed sequential and reciprocal relationships between and among these constructs.

The complexity of the relationships between and among the four major theoretical concepts of this study indicates a need for a research design that moves beyond the "what" to the "how" and "why" questions. Merriam (1988) maintains that case study is "particularly suitable methodology for dealing with critical problems or practice and extending the knowledge base of various aspects of education" (p. xiii). This review of the literature examines case study research to determine appropriate and "best practices" for the application

of research methodology as it relates to the specific research questions being examined in this study.

Middle Level Schools

The student-centered middle level school is the underlying construct of this research study. This section of the review of literature begins with a historical perspective on the middle level school as a transition between elementary and high schools. A thorough description of the characteristics of middle level students forms the foundation for a summary of student-centered practices which operationalize the middle school concept. A discussion of structures of the middle school; including organizational, management, and staffing patterns; student grouping strategies; curriculum, instruction, and assessment in the middle school; support and advisory structures; and parent and community relations; completes the review of literature related to the middle school concept.

When the Committee of Ten, in 1893, recommended that secondary education include six years of schooling, the contrast between elementary and secondary education began (cited in George, Stevenson, Thomason, & Beane, 1992). This was reinforced and endorsed by the "Cardinal Principles of Secondary Education" published by the National Education Association's Commission on the Reorganization of Secondary Education in 1918 (cited in Cuban, 1992). In 1913, the junior high school was specifically mentioned in the report of the Committee on the Economy of Time in Education (cited in Cuban; cited in George, Stevenson, Thomason, & Beane). According to George, Stevenson, Thomason, and Beane, these junior high schools were to be "based on the characteristics of young adolescents and concerned with all aspects of growth and development" (p. 3). The curriculum was to be designed to provide depth while increasing learning skills; the school would be a transition between the general education of the elementary school and the more specialized curriculum of the high school.

This was the intent but not always the reality (Cuban; George, Stevenson, Thomason, & Beane; Lawton, 1987).

The junior high school, more frequently, resembled the high school with teachers organized by curriculum area, grouping of students based on ability as measured by an intelligence test or indicated by previous academic performance, and subject matter study leading to specialization for high school study. By the end of World War II, this junior high school was common to most American school districts as higher education and growing school enrollments influenced the K-12 public school system (Cuban, 1992; George, Stevenson, Thomason, & Beane, 1992; Lounsbury, 1991).

Beginning in 1961 with the publication by ASCD of The Junior High School We Need by Grantes, Noyce, Patterson, and Robertson and followed by ASCD's 1975 publication of The Middle School We Need (cited in George, Stevenson, Thomason, & Beane, 1992), calls for reform of the junior high school have emphasized the need for a student-centered school which is developmentally appropriate for the young adolescent. Cuban (1992) describes the evolution of thought regarding the purpose of the middle level school. He documents the variety of reasons given by administrators of middle level schools but states that, by 1977, the dominant reason for the middle school given by administrators was to "design a program geared specifically to the social, psychological, moral, and intellectual needs of early adolescents" (p. 243).

The most recent national level report on middle level education is Turning Points, the report of the Carnegie Council on Adolescent Development (1989). This report looks at middle level education in the context of current American society and makes eight specific recommendations for middle level schools which include 1) creating a community for learning; 2) teaching a core of common knowledge; 3) ensuring success for all students; 4) empowering teachers and administrators; 5) preparing teachers for the middle grades; 6) improving academic

performance through better health and fitness; 7) reengaging families in the education of young adolescents; and 8) connecting schools with communities.

The result of these calls for reform is an attempt to redesign middle level schools to be more like the original recommendations for middle level schools from the Committee on the Economy of Time in Education in 1913. The curriculum of the middle school attempts to provide depth and exploration while increasing learning skills through interdisciplinary instruction. The middle school is a transition between the general education of the elementary school and the more specialized curriculum of the high school. Guidance and exploration are emphasized; independence and responsibility are valued. These schools are based on the characteristics of young adolescents and concerned with all aspects of growth and development.

Characteristics of Middle Level Students

The discussion of student-centered middle level schools must begin with a clear understanding of the middle level student if we are to create schools which are developmentally appropriate to the young adolescent. These students are in transition between childhood and young adulthood and present a unique set of characteristics which include broad extremes of behavior, attitudes, and physical attributes. This transition, however, involves more than simply passing between stages of life; during these middle years "young people form their own answers to the fundamental questions of life and decide on the values and standards which largely determine their behavior in the future" (Lounsbury, 1991, p. 69). The middle years and, thus, the middle level school are, perhaps, the most crucial period of life and schooling rather than a holding passage between other stages.

A deep understanding of who young adolescents are and what their needs are is the essential first step in identifying the components of the student-centered middle level school as this forms the basis for all decisions regarding programming and policy for the school. The

middle school literature discusses the characteristics of middle level students in four categories: physical, emotional, social, and intellectual development.

Physical characteristics

Young adolescents are going through a turbulent time in their physical development. Characterized by rapid growth spurts, periods of restlessness, nutritional imbalances, and hormonal changes with accompanying physical changes, the physical growth of young adolescents results in a school with an extremely diverse group of students (Campbell, 1991; McEwin & Thomason, 1989; Merenbloom, 1988; National Middle School Association [NMSA], 1992; Wiles & Bondi, 1986). Physically, students exhibit development ranging from pre-pubescent children to fully developed adults, the widest range of individual differences and variations in growth patterns of any school level (McEwin & Thomason; Merenbloom; Wiles & Bondi). These disproportionate growth changes often result in awkwardness which interferes with self-esteem in the young adolescent (Campbell; NMSA).

Sexual maturation is another aspect of the physical growth and development of the young adolescent. Puberty results in marked changes with the onset in girls beginning at approximately age 12 and in boys at age 14 (Merenbloom, 1988; NMSA, 1992). The development of secondary sex characteristics causes concern for the young adolescent, as does the lack of such development; the result is additional disturbance to the self-esteem of the individual.

Another side effect of the drastic physical changes taking place in the young adolescent is energy shifts ranging from extreme restlessness to listlessness and fatigue (NMSA, 1992; Wiles & Bondi, 1986). Basal metabolic rates and nutritional imbalances both contribute to energy shifts. In addition, rapid bone growth and ossification of cartilage in epiphysial areas of bones results in lack of protection for boney surfaces and discomfort when sitting for long time periods; thus, what appears to be restlessness is actually pain from hard chairs (NMSA).

Some implications for middle level school programming include a need to incorporate frequent movement opportunities both within the academic classroom in the form of activity-based instruction as well as within the physical education and activity programs to allow daily gross-motor activity. Nutrition breaks built into the school day not only prevent fluctuations in blood sugar levels but also offer an opportunity to teach healthy eating habits (NMSA, 1992; Wiles & Bondi, 1986).

Social characteristics

The social characteristics of young adolescents are also reflective of the changes taking place in these young people. Socialization is one aspect of the transition between child and adult and includes the moral values which define the socially acceptable behavior for a society/community. Socialization takes place through interactions with both peers and adults who are significant in instructional and non-instructional aspects of the young adolescent's life (McEwin & Thomason, 1989; Merenbloom, 1988; NMSA, 1992).

While remaining attached to and in need of adult/parental support, there is a significant shift to the peer group as a source of validation of self-worth (Campbell, 1991; NMSA, 1992; McEwin & Thomason, 1989; Merenbloom, 1988; Wiles & Bondi, 1986). The young adolescent is frequently in conflict with a need to please adults while also needing to establish autonomy and independence. Young adolescents often appear disorganized and irresponsible, yet, given responsibility (either engineered or through crisis) they frequently surprise even themselves with their ability to make good decisions and cope in positive ways. Altruism and high ideals are directed toward oppressed groups within the context of the school, community, church, and government (NMSA).

Membership in the peer group becomes a strong social need for the young adolescent, making them vulnerable to peer pressure and gangs or division into labeled groups (Campbell, 1991). Individuality is sacrificed for acceptance (NMSA, 1992), and conformity includes fads of clothes, speech, and mannerisms which often conflict with expectations of adults (NMSA;

Wiles & Bondi, 1986). Behavior of the group toward outsiders sometimes borders on cruelty (NMSA; McEwin & Thomason, 1989; Wiles & Bondi). The peer group may be heterosexual, but same sex affiliations remain the strongest relationships in transescence (NMSA; Wiles & Bondi).

The strong association with the peer group often creates conflict with adults but does not eliminate the need for adult influence and interactions with the youth (McEwin & Thomason, 1989; NMSA, 1992). Young adolescents are beginning to question some of the basic values of the significant adults in their lives, not so much with the intent of rejecting those values as with a need to understand on a deeper level in order to assimilate those values into their own emerging belief system. A new relationship between youth and adults is emerging as young adolescents realize that adults are not perfect and that adults' suggestions may be accepted or rejected (McEwin & Thomason; NMSA; Wiles & Bondi, 1986). Identification and significant relationships with adults expand beyond the parents to other adults (Wiles & Bondi).

Based on these characteristics, schools in the middle need to attempt to provide support and opportunities for students to practice decision making and to dialogue with adults and peers regarding issues of importance to them. Discipline and rules in the school need to be fair and rational to the students, and they need an opportunity to participate in development and establishment of some of the norms and regulations under which the school operates (Glasser, 1986, 1990; Wiles & Bondi, 1986).

Emotional characteristics

The movement from a concrete "black and white" world of childhood to the abstract "shades of gray" world of the adult is another journey in the transition of the young adolescent (NMSA, 1992). Emotional outbursts are common responses to rapid shifts and variations in mood with leave the young adolescent emotionally fragile (Campbell, 1991; Wiles & Bondi, 1986). The response to events in their lives is frequently exaggerated and out of proportion to

the event, particularly in the case of anything with sexual implications (Campbell; McEwin & Thomason, 1989; NMSA; Wiles & Bondi).

Despite, or perhaps due to, frequent self-criticism and insecurity, direct or implied criticism by adults adds to the emotional stress of the young adolescent, who is very sensitive and easily offended (NMSA, 1992; Wiles & Bondi, 1986). The strong desire to become independent and increase personal decision making conflict with a need for security, direction, and reassurance from significant adults (NMSA).

To support the emotional development of young adolescents, middle level schools need to provide a safe and supportive environment which allows the young person to express, explore, and alleviate his/her fears (McEwin & Thomason, 1986). Sarcasm should not be used by adults and should be discouraged among youth and peers by teachers and administrators (Wiles & Bondi, 1989). The young adolescent's strong sense of fairness should be both reinforced and utilized in the disciplinary practices of the classroom and the school (Campbell, 1991; McEwin & Thomason, 1986). The need to develop decision making strategies can be met through the disciplinary policies and practices as well as through the academic and intellectual pursuits of the middle level school.

Intellectual characteristics

Intellectually, these students are again 'caught in the middle' with periods of rapid growth and lengthy plateaus in brain development (Merenbloom, 1988; NMSA, 1992). Their intellectual activity is characterized by curiosity and interest in diverse topics. There may be short periods of intense interest in a subject/topic, quickly followed by a shift to a totally different set of interests usually based on the "usefulness" of the topic to the young adolescent (Wiles & Bondi, 1986).

The range of cognitive development, defined in Piagetian terms, is from concrete operational to formal operational thinking (McEwin & Thomason, 1989; NMSA, 1992; Wiles & Bondi, 1986). For the educators in this school, this results in classrooms with students'

abilities ranging from acquisition of basic skills to those performing higher order thinking strategies routinely. While this may not be an effective period to introduce large quantities of new material in depth, new ideas are especially appropriate as they can be connected to prior learning of the students and to current interests, concerns, and issues of the students. Middle level school students enjoy discussing experiences with adults and often argue to clarify their own thought as much as to convince others (NMSA).

Because the majority of young adolescents are concrete thinkers, hands-on experiential learning is preferred (McEwin & Thomason, 1989; Wiles & Bondi, 1986). Active learning which includes interaction with peers during the learning process supports the need for socialization as well as intellectual development (Wiles & Bondi). Slow-rate and fast-rate learners continue to develop at their own rates, and short-term rather than long-term goals focus on realistic learning expectations and experiences (McEwin & Thomason; NMSA, 1992; Wiles & Bondi).

The physical, social, emotional, and intellectual development characteristics of the young adolescent define the foundation for the student-centered middle level school. Certain practices are the natural result of this developmentally appropriate focus for the middle school and are exemplified in the structures of the middle level school.

Structures of the Middle School

With an understanding of the characteristics of the young adolescent, certain practices and policies become not only appropriate but, perhaps, mandatory for the middle level school. A disregard for this information is to continue, as Carl Glickman (1991) has said, 'pretending not to know what we know.' These practices relate to the organization of the school into a learning community; the management strategies employed; the staffing patterns; the grouping of students for optimal learning; the curriculum, instruction, and assessment; the support services; and the relationship of the school with its external environment.

Each of these areas is discussed in this review; however, the issue of the grades to be included in the middle level school warrants attention separate from these other issues. There is a common misperception among the general population that middle school is defined as any school which includes grades 6-7-8, yet, authors of middle level education consistently report that the grade structure is not the primary issue and, in fact, is not as definitive as the practices and policies in place in the middle level school (Cuban, 1992; Epstein, 1990; Valentine, 1984). Epstein found 30 different grade spans for schools which include seventh-grade students. Even when grouped into six categories, the grade span did not predict the practices and policies of the school; however, schools with a grade span of 6 or more grades were less likely to have implemented many of the 22 practices often recommended for middle grades than schools which included grades 6-7-8 or grades 7-8 (Epstein). The conclusion is that schools with a narrower focus on the middle level student are more likely to implement the best practices of middle level education than those schools which must include a broader range of student ages. George and Oldaker (1985) found that schools that were effective attributed their success to two factors – academic emphasis and the psychosocial environment.

It is not, then, the grade span of the middle level school or, for that matter, the name which makes it a middle school, but rather the practices and policies in place within the school which define its purpose and culture. A number of studies within the context of the effective schools research have identified those practices which make the difference for the young adolescent and which contribute to a student-centered school at the middle level. Epstein (1990) examined 22 recommended practices for the middle school and identified the following practices as "key practices": interdisciplinary teams of teachers; common planning time for teams of teachers; flexible scheduling; students assigned to the same homeroom or advisory teacher for all years spent in the middle grades; cooperative learning as an instructional approach; exploratory courses and minicourses; parent involvement in workshops on early adolescence; and parents as volunteers in the middle grades.

Hornbeck and Arth (1991) cite the 1985 report of the National Association of Secondary Principals [NASSP], An Agenda for Excellence at the Middle Level. In this report NASSP's Junior High/Middle School committee identified 12 elements of middle level education: 1) core values to be transmitted to the students; 2) culture and climate of the school; 3) student development; 4) curriculum for middle level students; 5) appropriate learning and instruction; 6) school organization; 7) use of technology; 8) specially trained teachers; 9) transition; 10) preparation of principals; 11) connections with the public; and 12) client centeredness (Hornbeck & Arth, p. 96).

These practices parallel the eight recommendations of the Carnegie Council on Adolescent Development (1989) and exemplify the strategies suggested throughout the middle school literature. A discussion of strategies and practices recommended for the middle level school follows with strategies grouped into the following categories: organizational arrangements; management strategies; staffing patterns; student grouping strategies; curriculum, instruction, and assessment; support services; and the relationship of the school with its external environment including parents and the community.

Organizational arrangements

The National Middle School Association (1992) , in This We Believe, suggests that a fully departmentalized, ability-grouped, seven period day (the traditional organization of the junior high) is inappropriate for what we know about the young adolescent and is another example of the mini-high school approach to middle level education. The alternative organizational structures suggested include block scheduling, multi-age grouping, alternate schedules, and a school-within-a-school team approach. NMSA joins others in suggesting the establishment of interdisciplinary teams for academic instruction and psychosocial development of the young adolescent.

In Turning Points, the Carnegie Council on Adolescent Development (1989) recommends the organization of the middle school through the formation of communities for

learning within the school. How this is accomplished depends entirely on the individual school context. Epstein found that enrollments of middle schools (those including grades 6-7-8) in her sample ranged from 100 students to more than 2,250 students. In small rural schools, the learning community might include all the students in the middle level school, perhaps encompassing two or three grade levels. In larger schools, this may necessitate development of a variety of teams of teachers and students who function as schools-within-a-school. The guiding principle should be that the learning community should be sized such that all members have the opportunity to become acquainted with each other, that a common bond can be formed, and a sense of trust and mutual interdependence be developed (Carnegie Council on Adolescent Development).

George and Oldaker (1985) define this atmosphere as the psychosocial environment and suggest that a "positive psychosocial environment is the enabling force which permits teachers to be successful with the academic emphasis" (p. 7). They found that, in academically successful schools, teachers and students were on the same team and shared common goals and norms for behavior. An "ethos of caring" is exemplified by teachers working and planning together, students participating in and taking responsibility for learning, and stable teaching and friendship groups among teachers and students which extend beyond one school year.

Further support for the learning community/team concept is offered by George and Oldaker (1985) in citing a study at the University of Florida in which six middle schools within the same school district were examined to determine the nature and quality of interracial interactions among students. Because of the district organization and policies, virtually all aspects of the schools were the same except that two were organized into learning teams and the other four were not. The study found significantly more positive interracial interactions and climate in the schools with teaming. Ethnographic analysis of two of the schools as a follow-up to the initial study confirmed a difference in teacher perspective and practices in the school with teaming as opposed to one without a team organization.

The organization of time within the middle school also reflects the team organization. Decisions regarding use of time and blocking of academic and exploratory time are made by the team in an attempt to accommodate the range of learning styles and behaviors of the young adolescent (George, Stevenson, Thomason, & Beane, 1992). Scheduling includes time for breaks for the students in which physical and social needs can be facilitated. A snack break can be incorporated into the morning to allow students to move around informally, to meet the need for balance nutritionally, and to interact with peers in a socialized setting. Lunch breaks also need to include balanced meals, physical activity, and socialization.

Class periods should not be excessively long without changing intellectual activity, yet flexibility is needed to allow for the intense in-depth study at times. NMSA suggests that classes, or subjects, do not need to meet at the same time for the same period of time each day or week, but rather that the interdisciplinary team should make scheduling decisions and should be allowed to experiment with creative uses of the block of time given (NMSA, 1992). Jung and Gunn (1990) describe a team-block schedule being used in Des Plaines, Illinois, which allows teacher teams to control the used of blocks of time for instruction and facilitates the use of interdisciplinary instruction within the team. The key for time organization in the middle level school is variety and flexibility with control of time in the hands of the teacher teams (Carnegie Council on Adolescent Development, 1989).

Management structures

Management strategies for schools in the middle also must be based on variety and flexibility. The Carnegie Council on Adolescent Development (1989) recommends that teachers and administrators of middle level schools be "empowered" to make the decisions concerning the learning experiences of their students. Hornbeck and Arth (1991) purport that academic productivity is enhanced by decisions made at the lowest possible level in the organization. These statements support the trend toward site-based decision making for the

middle level school as well as the autonomy of the interdisciplinary team in determining the practices and procedures for the learning experiences of the students.

George and Grebing (1992) list "Seven Essential Skills of Middle Level Leadership" which also include the concept of shared decision making. Their skills for middle school principals are: 1) compassionate understanding of the characteristics and needs of the developing adolescent; 2) development and communication of a school philosophy based on student needs; 3) shared decision making that involves collaboration among stakeholders on decisions, solutions, and policies leading the school toward its vision; 4) development of an interdisciplinary team organization based on the unique teachers and students in the individual school; 5) a process for ongoing school improvement; 6) instructional leadership with individual teachers, teams, and team leaders; and 7) hiring and maintaining an effective staff.

The Carnegie Council on Adolescent Development (1989) offers three strategies for empowering teachers and administrators. The first relates to the team organization of the school and involves teachers making decisions and implementing strategies in the classroom. Teacher teams should have time to plan and work together to develop the instruction schedule, discuss instructional and classroom management strategies, share successes, and problem solve (Carnegie Council on Adolescent Development).

The second strategy for empowerment is the creation of building governance committees whose role is to make decisions and implement strategies which affect the entire school (Carnegie Council on Adolescent Development, 1989). This group is an advisory team to the building principal as well as a consensus building body representing the entire school staff. The building governance committee serves as a liaison to the interdisciplinary teams enhancing communication within the school. The building governance team is a vehicle for shared decision making resulting in personal ownership, collaboration, and consensus among school staff (George, Stevenson, Thomason, & Beane, 1992).

While related to the team organization and building governance strategies, the third strategy for empowerment offered by the Carnegie Council on Adolescent Development (1989) directly addresses the administrative team within a school building. The designation of teacher leaders, or lead teachers, for the school-within-a-school divisions results in a new role for the building principal. As the team leader assumes the responsibility for facilitating the instructional and classroom management work of the team, the building principal focuses on the safe and efficient functioning of the entire building. The role of the principal involves helping groups solve problems, articulation of a broad educational vision, planning based on a "big picture" perspective, dealing with the civic and political context of the school, allocating resources fairly and equitably, and using data to ensure public accountability of school-wide student achievement (Carnegie Council on Adolescent Development).

With the understanding of the vast range of differences physically, socially, emotionally, and intellectually among these students, the belief that it is unfair to treat unequals equally guides the discipline and management policies of the middle school. Administrators and teachers are also "not equal", and, thus, it is unreasonable to expect that all will employ identical strategies or policies. However, it is important that the basic operating procedures be common and supported by all, as the young adolescent needs security, safety, and consistency. The development of the rules and policies by empowered students, staff, and administration enhances the academic endeavors of the school.

Staffing patterns

Staffing patterns in the middle school are related to management in that teachers and support staff should be selected in part on their knowledge of and ability to select appropriate educational strategies for the young adolescent. This necessitates teachers who are specifically prepared for the middle level school including an understanding of the developmental characteristics of the students, knowledge of state-of-the-art practices for education of young adolescents, and broad general knowledge in addition to in-depth content knowledge in areas

of specialization (Carnegie Council on Adolescent Development, 1989). Certain characteristics are important for teachers of middle level schools which enable them to experience success with these students. Teachers (and administrators) need to be able to employ a variety of teaching strategies including large group, small group, and individualized instruction. Ability to plan cooperative learning activities and to design authentic curriculum and assessment is important. Due to the need for interdisciplinary-integrated curriculum, teachers need to be able to work on a team both for planning and for delivery of instruction. In addition, teachers need a solid core of knowledge in specific subject areas (Carnegie Council on Adolescent Development).

To meet the Carnegie Council on Adolescent Development's (1989) recommendation for teachers specially prepared to teach young adolescents, a reform of teacher training programs and specific teacher certification standards for middle level teachers are endorsed by numerous authors (DeMedio & Mazur-Stewart, 1990; George, Stevenson, Thomason, & Beane, 1992; Hornbeck & Arth, 1991; Lounsbury, 1991; Richardson, 1992; Valentine & Mogar, 1992).

Turning Points: Preparing American Youth for the 21st Century offers three advantages to specific teacher certification (Carnegie Council on Adolescent Development, 1989). "First, it would recognize the special talents and training of a teacher who has decided to teach young adolescents. Second, it would encourage schools of education to offer specialized courses for the middle grades. Third, it would provide a fully legitimate status for middle grade teachers" (p. 60). Certification for middle level teachers would bring prestige to the job of middle school teacher, increase the options for employment for specially prepared teachers, create a cadre of highly qualified middle level teachers, and expand the pool of professionals qualified to take leadership roles (Carnegie Council on Adolescent Development).

Despite widespread endorsement of specific middle level teacher certification, Valentine and Mogar (1992) report that only 33 states offer specific middle level certification, and of

those, only 12 require middle level certification for employment in the middle level school. They do report, however, that the number of states offering middle level certification has increased steadily since 1975 and six states are in various stages of development of middle level certification. In addition, ten states offer middle level principal certification with seven requiring certification and teaching experience at the middle level (Valentine & Mogar).

Middle level certification offers guidelines and incentive to teacher education institutions as well as to middle school administrators who are hiring and maintaining a quality middle school staff; however, a clear knowledge and understanding of those characteristics and skills which lead to successful teaching of the young adolescent are critical to those who are attempting to select the appropriately prepared and best teachers for the middle school.

McEwin & Thomason (1989) describe the competent middle level teacher. These teachers have a thorough knowledge of the developmental nature of young adolescents; they have subject matter and instructional expertise. Competent middle level teachers give attention to professional decisions, balance teacher-directed and student-initiated learning, and have classroom management skills which diminish classroom disruptions. Effective middle level teachers monitor student progress and adjust instruction accordingly, demonstrating good planning. Effective middle level teachers are reliable and consistent role models who accept diverse populations without negative stereotypical expectations (McEwin & Thomason). Lounsbury (1991) continues the description of effective middle level teachers as those who understand the potentially volatile behavior of the young adolescent. These teachers are able to provide support and guidance in the psycho-social development of the middle level student.

The middle level teacher described in Letters from the Middle (Goerss, 1993) is flexible, able to deal with the unpredictable, and willing to listen. This teacher establishes clear guidelines, encourages students to question and search for information while accepting limitations of young adolescents. Good teachers are good learners who create a positive learning atmosphere both for their students and for themselves and their colleagues (Goerss).

Not only do teachers of the middle school need to possess a unique set of characteristics to be successful with young adolescents, the principal of the middle school also needs certain qualities. Leaders of the middle school, like teachers, need a clear understanding of the developmental characteristics of the young adolescent and must translate that understanding into a vision for the effective middle level school (George, Stevenson, Thomason, & Beane, 1992). They must be able to organize staff, students, programs, time, and the building into a student-centered learning environment. Leaders must be change agents who invite participation from teachers, parents, community members, and central office administration in decision making which maintains and improves the school (George, Stevenson, Thomason, & Beane).

Maintenance of a quality staff, also the responsibility of the principal, requires quality staff development. George and Oldaker (1985) report that exemplary middle schools are characterized by teachers who are involved in staff development programs to facilitate implementation of middle school philosophy, curriculum, and objectives. For these schools, the staff development programs are based on assessed needs and interests of the staff and often involve partnerships with local colleges and universities. Participation in state and national conferences on middle level education issues is encouraged. The most effective staff development programs involve teachers and administrators as consultants (George & Oldaker).

Student grouping strategies

While the grouping of students into teams with an interdisciplinary team of teachers guiding and facilitating the learning has been discussed as an integral component of the exemplary middle school, the grouping of students within the interdisciplinary team and the individual classroom is also an issue for middle level education. Despite a plethora of evidence against the practice of ability grouping, or tracking, in middle level schools, Braddock (1990) found ability grouping to be a common practice occurring either within a block of students as they are grouped for specific subject instruction, or within an entire block as teams of teachers

work with homogeneous groups of students. Braddock's survey revealed that approximately two-thirds of the schools surveyed have some form of tracking and 20% group students by ability for all classes. The percentage of tracking increased with the grade level with 73% of the schools tracking in grade 8 for at least some subjects. Further analysis of Braddock's grade 8 data reveals that 88% of students are ability grouped for mathematics instruction while only 10% are tracked for social studies.

A distinction is made between grouping of students for whole classes of instruction, frequently called tracking, in which students are placed into sections or classes based on ability, and within-class ability grouping where heterogeneous classes are grouped for instruction based on ability or achievement level. Slavin (1991) reports that the within classes type of grouping is more common in the elementary classroom than in the secondary classroom and that high, average, and low students seemed to benefit from grouping within classes.

With mathematics increasingly considered a gateway skill for the technological world of work, the issue of equity of opportunity is alarming in light of the tracking practices in middle schools (Oakes, 1986; Schmidt, 1992). Oakes quotes Fenstermacher when questioning the ethics of tracking stating that the practice of ability grouping denies students equal access to the knowledge and understanding available to humankind. John Dewey referred to knowledge as the "funded capital of civilization", and Oakes contends that tracking deprives some students of access to that capital (p. 15). Schmidt further notes that tracking has been found to decrease the likelihood that interracial relations among students will be positive.

Swank, Taylor, Brady, Cooley, and Freiberg (1989) studied tracking practices in middle schools where mildly handicapped students were mainstreamed into the general classroom. They found that students in homogeneous classrooms spent less time on task and more time involved in conduct related activities than students in heterogeneous groupings. They also found that teachers in homogeneous classes spent more time providing academic

guidance and instructions, but also spent more time providing feedback and instructions related to behavior and classroom management issues.

Some evidence has shown that ability grouping in the middle level school does not benefit high-achieving students and causes harm to low-achieving students (Schmidt, 1992; Toepfer, 1991). Advocates for the gifted, high-achieving students, however, continue to defend the practice of ability grouping (George, 1993). George reports ten tentative truths regarding the practice of ability grouping in the middle school: 1) Ability grouping in the middle school is difficult to accomplish fairly and accurately; 2) Once placed, students are unlikely to move to a faster group; 3) Ability grouping overemphasizes the role of individual ability in learning and de-emphasizes the importance of student, teacher, and parent effort; 4) Student self-esteem is significantly affected by ability grouping; 5) Academic achievement does not increase with ability grouping; 6) Racial, ethnic, and socio-economic segregation may result from ability grouping; 7) A sense of community is damaged or destroyed by ability grouping; 8) Resource allocation is unfair and unequal in ability grouping; 9) Some ability grouping practices have been ruled to be illegal; and 10) All middle school students deserve effective instruction in challenging curricula.

Untracking the middle school is a challenging process which requires a shared belief (shared by students, teachers, administrators, and parents) that all students benefit from challenging curriculum, phasing in of heterogeneous groupings, and recognition that the very culture of the school must shift (George, 1993; Steinberg & Wheelock, 1992). The foundation for untracking the middle school is high expectations for all students (How to cross to untracking, 1993). Wheelock (1992) emphasizes that untracking is the means and not the end. The goal is improved learning and equal access for all students.

Detracking involves new techniques and activities aimed at meeting the needs of special needs students, at both ends of the spectrum (Oakes & Lipton, 1992). It results in changes in the curriculum, in instructional strategies, and in assessment methods (Merina, 1993; Oakes &

Lipton; Steinberg & Wheelock, 1992). Cooperative learning, interdisciplinary curriculum, and authentic and portfolio assessment are frequently included in detracking strategies. These changes tend to be in line with the strategies advocated by proponents of the child-centered, developmentally appropriate middle school.

Curriculum, instruction, and assessment

The ideal curriculum, instruction, and assessment of the middle level school reflects the needs of the students. The curriculum needs to be relevant to the issues and concerns of the young adolescent while providing practice and acquisition of basic skills (Becker, 1990; Carnegie Council on Adolescent Development, 1989; George, Stevenson, Thomason, & Beane, 1992; Lounsbury, 1991; NMSA, 1992). Opportunity to develop the skills for learning such as higher order thinking, reasoning, research skills, etc. are also essential to the middle level student (Hornbeck & Arth, 1991). The curriculum needs to be connected within disciplines; arranged around themes which the students may (at least sometimes) be involved in selecting and developing, the curriculum incorporates these skills in meaningful ways. Exploration of a variety of topics academic, vocational, and recreational is appropriate for the young adolescent (Compton & Hawn, 1993). The curriculum should incorporate a common core of knowledge in mathematics, language arts, science, and social studies (Carnegie Council on Adolescent Development). In addition, exploration in aesthetic and practical arts should be included. Physical education is essential and should be offered daily; health, including sex education, must be included for the young adolescent as experimentation with unhealthy behaviors frequently begins at this age (McEwin & Thomason, 1989).

The position paper of the National Middle School Association (1993), Middle Level Curriculum: A Work in Progress, provides a comprehensive and concise summary of the recommendations regarding middle level curriculum. This paper suggests learning experiences for young adolescents should help young adolescents make sense of themselves and the world about them; should be genuinely responsive to students'

intellectual, physical, social, emotional, and moral development; be highly integrated, so that students see the connectedness of life; address students' own questions and focus upon enduring issues and ideas; open doors to new ideas, evoking curiosity, exploration, and at times, awe and wonder; teach the full range of communication skills in functional contexts; and actively engage students in problem-solving and a variety of experiential learning opportunities (NMSA). Teaching in the middle level school should draw on varied forms of intelligence and multiple modes of expression; nourish the imaginative life, cultivate initiative and responsibility; involve students in meaningful and useful service activities; accommodate individual differences and celebrate diversity; emphasize collaboration, cooperation, and community; significantly engage students in setting goals, planning, and assessing their own learning; encourage and challenge students to give their best efforts as life-long learners and doers; and, above all, seek to develop good people, fostering caring for others, democratic values, and moral sensitivity (NMSA). The learning environment should be one where young adolescents are understood, cared for, and trusted, and the belief exists that each one can succeed; knowledgeable, caring inquiring faculty and administrators are empowered and supported in creating curricula; respect characterizes interpersonal relationships; being and doing are regarded as important as knowing; and parents are considered an integral part of the learning process (NMSA). The position paper also alleges that the following practices are counter-productive to middle level learners: curriculum which consists chiefly of separate subjects and skills taught in isolation; faculty who are organized by departments; isolation of exploratory courses from academic endeavors; judging the content of learning to be more important than the process by which it is learned; teaching predominately through textbooks and worksheets or primarily through lecturing, rote learning, and drill; and labeling and tracking students into rigid ability groups (NMSA).

Interdisciplinary curriculum

The ideal curriculum in the middle level school is one which is integrated among the disciplines and affords students the opportunity to explore and identify significant learnings for themselves while challenging each individual student to exceptional and quality performance. Interdisciplinary curriculum is proposed by many authors as the curriculum approach most compatible with the middle school philosophy (Beane, 1990; Fogarty, 1991 Jacobs, 1989; Lounsbury, 1992; Stevenson & Carr, 1993; Vars, 1987). The interdisciplinary curriculum approach involves connecting the subject/content disciplines through curriculum which incorporates concepts from a variety of disciplines into one unit of study.

There are a variety of models of interdisciplinary curriculum (Jacobs, 1989). A continuum of models, moving from least to most complex, begins with parallel discipline design. In this model, instruction takes place within the subject-area classroom with lessons sequenced to correspond to lessons in other disciplines. The goal is to help students make connections between disciplines. While requiring communication and common planning between and among teachers, generally this model does not require any restructuring of the school day.

A second model of interdisciplinary curriculum is the complementary discipline (Jacobs, 1989) or multi-disciplinary (Beane, 1993) approach. Similar to the parallel approach, this model involves disciplines with similar or complementary content, such as mathematics with science or language arts with social studies, which investigate a theme or issue simultaneously. Instruction, as in parallel instruction, takes place within the individual content classroom without restructuring of the school day.

Interdisciplinary units or courses which bring together multiple disciplines require more change from the traditional discipline-based content model. The goal is to "use a full array of discipline-based perspectives" (Jacobs, 1989, p. 16). In the secondary school, interdisciplinary units are planned by a team of teachers representing the various disciplines and

are designed for delivery over a specified length of time. As with other interdisciplinary models, the units are developed to explore a particular theme or issue. Webbing is a common technique used to plan interdisciplinary units in which the concepts from each discipline can be visually interconnected and included in the overall design of the unit (Beane, 1991; Fogarty, 1992; Heck, 1992; Levy, 1992; Stevenson & Carr, 1993). In addition, Fogarty offers a variety of other planning strategies which could be applied to any of the interdisciplinary curriculum models. The development and implementation of interdisciplinary units requires common planning time for the team of teachers and flexibility in the school schedule to allow varying instructional strategies and groupings.

The most complex interdisciplinary curriculum strategy is the integrated curriculum model (Beane, 1990; Jacobs, 1989). The integrated model is designed around the interests and needs of the students and involves them in the planning and development process. The problems, themes, or issues to be studied emerge from the world of the students. This model requires great flexibility of the classroom structure and is used primarily in elementary and early childhood settings, however, Beane describes an application of this model for middle level students which can be used within the context of the interdisciplinary team of a middle school and involves the students in the planning process, not only in identification of the themes to be studied, but also in the development of skills and strategies needed to successfully study the theme.

Cooperative learning

A wide range of instructional strategies are needed to support the interdisciplinary curriculum of the middle level school (McEwin & Thomason, 1989; NMSA, 1992). The instructional strategies are selected based on the best method to facilitate the learning desired, and large group presentations, small group work, and individual work are all used when appropriate (McEwin & Thomason).

Small group work frequently uses the principles and practices of cooperative learning, not only to facilitate the intellectual development of the students, but also to support the psycho/social needs and to develop the social skills needed to function as a part of a team (George, Stevenson, Thomason, & Beane, 1992). In addition, cooperative learning is proposed as a strategy to facilitate untracking of the middle school, as well as a developmentally appropriate practice for the middle school (Koerner, 1989; Merina, 1993; Steinberg & Wheelock, 1992; Toepfer, 1991;Wheelock, 1992). Cooperative learning involves heterogeneous (sometimes homogeneous) groups of students working together to solve problems or work toward a common goal (George, Stevenson, Thomason, & Beane).

Toepfer (1991) compares competitive learning experiences to cooperative learning and suggests that collaboration and cooperation offer more powerful means to improve learning and achievement. The interdependence which is a part of cooperative learning fosters success and alleviates the fear of failure often felt by students working alone. The ability to communicate with peers is necessary to cooperative learning resulting in empowerment of students (Toepfer). Another side effect of cooperative learning is trust and a sense of community among students and teachers which also enhances the learning environment (George, Stevenson, Thomason, & Beane, 1992).

Toepfer (1991) reports the cumulative results of effectively using cooperative learning. He emphasizes that cooperative learning is a generic instructional strategy which enhances the learning of content, processes, ideas, and skills but does not replace them in any way. Benefits include the ability of students to learn content with more depth and in less time than with teacher-directed instruction. The safe psychological environment encourages the correction of mistakes without negative judgment (Toepfer). Cooperative learning is philosophically in line with the basic tenets of the student-centered middle school and supports the interdisciplinary curriculum (George, Stevenson, Thomason, & Beane, 1992).

Alternative assessment

Assessment strategies corresponding to the curriculum and instructional strategies in the middle school should also be varied and flexible. Ideally, all assessment strategies will be authentic in that they will be appropriate for the measurement of the intended learning. Because early adolescence is a critical phase in the development of self-esteem, assessment and grading in the middle school should facilitate student understanding of individual strengths, weaknesses, values, interests, and personalities (NMSA, 1992). Learning the art of self-evaluation is important in developing a fair and realistic self-concept (NMSA). Students individual learning styles can be accommodated by allowing a variety of methods to demonstrate knowledge and skill. Assessment should be formative as well as summative and should provide students with meaningful feedback to improve learning, performance, and understanding (Aseltine, 1991; Wolf, LeMahieu, & Eresh, 1992).

The case for authentic assessment strategies is supported by the middle school philosophy (NMSA, 1992). Performance assessments and portfolios are suggested as appropriate evaluation strategies to enhance self-esteem as well as to make the connection between learning and the real world of the young adolescent, both of which are developmentally appropriate to the psycho-social and intellectual development of the young adolescent (Aseltine, 1991; Wolf, LeMahieu, & Eresh, 1992).

The grading and reporting practices of the middle school are inherently related to the assessment strategies used within the classroom and should reflect not only the developmental needs but also the curriculum needs of the student (Husk, 1983). MacIver (1990a) surveyed middle school principals regarding report cards. He found that most grades are based on academic performance, conduct grades and comments are common, and progress and effort grades are rare. This study reports that responsive report cards may motivate middle school students, especially at-risk students. Specifically, progress grades and handwritten comments

correlate significantly with lower retention rates, lower drop-out-rates for males, and more successful middle school programs (MacIver).

Support and advisory structures

Another aspect of the school, beyond the cognitive development through curriculum, instruction, and assessment, is the affective needs of the young adolescent. Comprehensive advising and counseling is provided in a variety of ways in order to enable the students to move through the difficulties of changing from dependent children to independent young adults (George, Stevenson, Thomason, & Beane, 1992; Merenbloom, 1988; NMSA, 1992). Guidance services should be provided through a certified guidance counselor and should be comprehensive including specialized activities to meet individual needs (such as support groups for new students or students with changing family situations) in addition to general guidance services. Merenbloom defines guidance as a total school program including student appraisal, information, individual and group counseling, educational and career planning, communication and consultation with parents, inservice for teachers, and academic placement.

Each staff member should also be a part of the guidance/support team through facilitation of home-base or advisory groups (Anderson, Gero, Lent & Sloan, 1991; Andrews & Stern, 1992; Carnegie Council on Adolescent Development, 1989; George, Stevenson, Thomason, & Beane, 1992; MacIver, 1990b; Merenbloom, 1988; NMSA, 1992). These are a semi-structured opportunity to provide opportunities for students to dialogue regarding issues of concern to them and to experience learnings that enhance self-esteem and sense of efficacy. A small group of students is assigned to a teacher, administrator, or other staff member for a regularly scheduled time. Activities and topics during this period include "discussing problems with individual students, giving career information and guidance, developing student self-confidence and leadership, and discussing academic issues, personal or family problems, social relationships, peer groups, health issues, moral or ethical issues and values, and multicultural issues and intergroup relations" (MacIver, p. 459.) Other issues which are

appropriate to the homebase or advisory group include tobacco, alcohol, and drug use; currents events in the school, community, nation, or world; and community service activities (George, Stevenson, Thomason, & Beane).

Merenbloom (1988) lists questions to be considered when establishing a homebase/advisory program. One issue he raises is that of the curriculum to be used in the advisory program. Provision of a curriculum guide helps teachers prepare for these periods without adding excessive responsibility. In addition, those teachers who are not as skilled at facilitation of group process are assisted by a curriculum that provides specific activities and guidelines for discussion (Merenbloom). The size and grade configuration are also identified by Merenbloom as issues needing resolution. He suggests keeping the groups small enough to facilitate active participation by all students. In addition, he proposes that a non-graded group which includes students from all the grades housed in the middle school allows older students to serve as mentors and affords more opportunities for peer tutoring and peer counseling/helping.

Andrews and Stern (1992), in sharing the experience of one middle school with advisory groups, report that the program was positive for students, staff, and parents. Students list the benefits as having an adult friend who cares for them, increased self-esteem and pride in themselves and the building. Parents agree with the students and express improved relationships with the advisor which enables better communication and understanding (Andrews & Stern). This relationship with parents is crucial to the student-centered middle school.

Parent and community relations

The relationship that the student-centered middle level school shares with its external environment is, like all other components of the program, is based on the needs of the students. Just as the student needs to see and experience connections, the school needs to model connections to the family and to the community from which the students come (Carnegie

Council on Adolescent Development, 1989; George, Stevenson, Thomason, & Beane, 1992; Mack, 1992; Merenbloom, 1988). Parents or significant adults in the students' lives need to be invited and encouraged to participate in the learning community in meaningful ways that go beyond back-to-school nights and conferences. Research supports the contention that parent participation in the learning process has a direct effect on student achievement, attitude, and aspirations (Merenbloom). In addition, when studying the effects of middle level school reform, George and Oldaker (1985) found that after reorganization, parent involvement increased including "better attendance at open houses, conferences, and PTA meetings as well as a greater propensity to volunteer as chaperones for field trips, dances, or other school socials" (p. 30).

Merenbloom (1988) offers the following list of meaningful strategies and ideas for involving parents in the educational process: 1) volunteer programs; 2) a parent lounge in the school; 3) informal gatherings of parents; 4) dinner/sports nights for interdisciplinary teams; 5) seminars on parenting early adolescent students; 6) Star of the Hour, which involves parents in a lesson featuring their child's written work; 7) publications; 8) individual conferences; 9) telephone calls; 10) interim reports; 11) radio and television announcements; 12) curriculum night; 13) special school/team events; 14) career day; 15) assignments that actively involve parents; 16) home study materials; 17) parent visitation day; 18) parent advocacy groups; 19) guest speakers; and 20) home visits.

Mack (1992) provides a set of strategies to engage parents in the educational process which is founded on the current structural and economic realities of American families. She offers six steps for recruiting families for middle schools. First, school staff must accept that the traditional family is not the norm and that it is more productive to focus on the components of successful families regardless of family structure. Second, schools should involve the students in planning for family involvement and focus on those ideas which will meet the needs of the family as well as the school. Third, schools should use up-to-date demographic data to

identify needs of families and to identify families with particular expertise which may be needed to enhance the educational process. The fourth step is the creation of middle level parent-community involvement curriculum teams which assist in the planning and implementation of the interdisciplinary curriculum. Long-range planning for subject integration and parent involvement is the fifth step and includes the establishment of a steering committee of key parents, community members, business persons, educators, and social agency representatives. Mack's sixth strategy is the use of technology to facilitate and enhance communication. One strategy being used by school to meet this criteria is recorded telecommunications which provides information regarding school events and interdisciplinary team curriculum activities while also enabling parents to record messages to specific teachers.

Just as family involvement influences the social, emotional, and intellectual development of the young adolescent, student sense of efficacy can be enhanced through participation in meaningful community service (Carnegie Council on Adolescent Development, 1989; George & Oldaker, 1985; George, Stevenson, Thomason, & Beane, 1992; Kiner, 1993). The external community can be connected to the school through partnerships for service within the school as well as for students in the community. Community service exposes students to fundamental social values which foster active social responsibility (George, Stevenson, Thomason, & Beane).

Community service for middle level students can take a variety of forms. In some schools, community service is mandated as a part of the school curriculum; in most it is a voluntary program, sometimes coordinated through the advisory program (Carnegie Council on Adolescent Development, 1989; George, Stevenson, Thomason, & Beane, 1992). Activities undertaken for community service include volunteering at senior citizen centers, nursing homes, soup kitchens, child care centers, parks, and environmental centers (Carnegie Council on Adolescent Development).

Community service, family involvement, advisory and support structures, curriculum, assessment, and instruction, school staff, management strategies, and organizational patterns within the middle school are all designed and selected to facilitate the physical, social, emotional, and intellectual development of the young adolescent. The middle school philosophy as described by the literature has as its primary function to meet the needs of the students such that they will be successful, not only in the middle school setting, but also in life in general. There are many factors within the middle school as well as the family and the community which impact the developing young person in both positive and negative ways.

Student Risk and Resiliency

This literature review continues with a discussion of student risk and resiliency as they relate to the development and life-long success of the young adolescent. This section synthesizes the current research and literature related to students at risk and defines the implications of successful programming for these youth. Current practices in programming to mitigate student risk and promote resiliency are described with implications and suggestions for future strategies and programming. This section concludes with a discussion of the role of the school in promoting resilience as a primary prevention strategy to safeguard against school failure and facilitate successful development of all young people to their full potential.

American public schools have consistently been a reflection of the society within which they function. In the current American culture, as well as many other world culture's, change is the norm, and the demographics are shifting so rapidly that public schools are struggling to keep pace and, unfortunately, not succeeding for many students. One example of demographic shift that involves school-aged youth is that the drop-out rate is actually lower than in any previous historical period. Yet, the current rate is considered by many to be alarmingly high, particularly in light of the fact that it is highest among minority youth, the fastest growing

population. The result is an increase in the number of students considered to be at-risk of school failure and/or not meeting their full adult potential.

The trend in prevention at the present time is a shift away from the negative risk factors and toward the protective factors which influence the development of resilience in individuals. Following the lead from the substance abuse field, school prevention specialists have begun to realize that intervention with youth who have been exposed to risk factors is simply 'too little, too late' while proactive development of coping strategies before the risk situations occur has more potential for success (Benard, 1991, 1993c; Hawkins & Catalano, 1992; Hawkins, Catalano, & Miller, 1992; Hixson, 1991a, 1991b, 1992). While this proactive approach is likely to require a shift in attitudes and beliefs as well as practice within the school culture, the resulting product–healthy, world-class learners–will be well worth the effort.

Student Risk

An examination of the world of young adolescents might lead one to conclude that simply being an adolescent puts a student at-risk. The social milieu of American society with a high divorce rate, violence in schools and communities, substance abuse, and rapidly changing work world which threatens the relevance of school curriculum creates a hazardous setting within which all American youth must attempt to grow and flourish. Iowa teachers in rural secondary schools report that 10.4% of their students meet the definition of at-risk and another 10-25% may be at-risk but have not been identified as such (Licklider, 1992).

The Iowa Department of Education definition of a student at risk includes parameters and characteristics which describe the risk factors:

> "At-Risk Student" - Is any student identified who is at risk of not: meeting the goals of the educational program established by the district, completing their high school education, or becoming a productive worker. These students include, but are not limited to, those identified as: dropout, potential dropout, teenage parents, drug users, drug abusers, low academic achievers, abused and

> homeless children, youth offenders, economically deprived, minorities, culturally deprived (rural isolated), culturally different, those with sudden negative changes in performance due to environmental or physical trauma and those with language barriers, gender barriers and disabilities. (Morley, 1988)

This statement is comprehensive and provides a functional or operational definition of students at risk which actually could include any student at any given time. There are, however, some specific circumstances and characteristics which increase the risk factors for some young adolescents as well as factors which promote resilience and mitigate those "risky" circumstances.

Identification of students at risk

Despite many programs designed to intervene and prevent school failure, the number of students at risk of school failure seems to continue to increase. Sagor (1992) describes these youth as distrustful with low self-confidence, a limited view of the future, an external locus of control, and inadequate peer relations. He suggests that they have fragile parents who either lack the skill or the will to provide the caring and support needed to promote resiliency. In addition, Sagor's description includes students who lack adequate basic academic skills, are impatient with routine activities, and are practical, experiential learners needing hands-on type learning.

"Students who have difficulty mastering the language, academic, cultural, and social skills necessary to reach the educational levels of which they are capable, [as well as] students whose aspirations and achievement may be negatively affected by stereotypes linked to race, national origin, language background, gender, income, family status, parental status, and disability" are considered at-risk in the Iowa accreditation standards which defines "provisions for at-risk students" (quoted in Students at risk: AEA planning assistance guide for local school districts, 1989). In addition to this broad definition, critical factors identified by the Council of Chief State School Officers (cited in Students at risk: AEA planning assistance guide for local

school districts) include poverty, as the primary factor, followed by lack of progress in basic skills and health, social, or family problems. Other identified factors are living with an alcoholic parent and chronic truancy from school.

Iowa school personnel report using the following criteria to identify students at risk and to determine eligibility for programming: poor grades, high rate of absenteeism, behavior problems, special home circumstances, low achievement, retention, substance abuse by parent(s), low family socioeconomic status, lack of identification with school, child or spouse abuse by parent, functioning below chronological age, limited or no extracurricular participation, chronically mentally ill, incarcerated, or illiterate parent, birth defect, parent has not completed high school, or parent was under age at child's birth (Licklider, 1992). This study also reports that Iowa schools use attendance, grades, and discipline records to monitor students at risk. Licklider suggests that these indicators of risk are used most frequently due to the ease with which they are spotted; while other indicators, such as underage parent at child's birth, are more difficult to uncover yet may have significant, albeit subtle, effects" (p. 12).

Wells, Bechard, and Hamby (1989) suggest that the criteria for identification of at-risk students vary among districts or communities and, therefore, should be developed by a team of local experts. Possible variables they consider when developing a functional definition include: "attendance, grade point average, standardized test composite scores, number of grade retentions, number of discipline referrals, educational level of parents, special program placements, free/reduced lunch program, number of school moves (transfers), reading and math scores, ethnic/gender distinctions, language spoken in home, number of suspensions, interest in school, participation in extracurricular activities, pregnancy/teen parent, number of counseling referrals, and family status (broken home, single parent family, family size)" (p. 3).

The concept of alienated children and youth is proposed by Brendtro, Brokenleg, and Van Bockern (1992), and their definition intentionally is focused away from the traits of the youth and toward the environment. Four ecological hazards include: 1) Destructive

relationships in which children are rejected and hurt; 2) Climates of futility which promote feelings of inadequacy and failure; 3) Learned irresponsibility developed by a sense of powerlessness manifest in indifference or defiance; and 4) Loss of purpose due to attempting to find "meaning in a world of confusing values" (Brendtro, Brokenleg, Van Bockern; p.6-7).

Many authors describe students at risk in the context of offering solutions. Harris (1992) includes the commonly accepted characteristics of low socioeconomic background, poor reading skills, poor attendance, dislike of school, little participation in school activities, poor self-concept, low aspirations, family problems, and discipline problems. However, she expands the definition to include academically and intellectually above average students who are critical of the gap between the educational experience provided by their schools and their real-life experience. Manning (1993a) and Owens (1992) include those factors cited by others and in addition suggest considering criminal behavior or involvement with the juvenile court system. Manning also specifically includes suicidal thoughts.

Rogus and Wildenhaus (1992) describe "conditions that underlie at-risk behaviors: academic underachievement, lack of self-esteem and self-respect, inability to communicate thought and feeling on an intimate level, limited conflict resolution and problem-solving skills, and unrealistic life expectations" (p. 2). They suggest that the first two conditions are traditionally addressed in at-risk programming, while the last three are less likely to be intervened upon directly. A holistic approach which addresses all conditions is proposed with the understanding that the conditions are interrelated and direct intervention on one will affect achievement on others.

Ruff (1993) acknowledges the indicators of other authors and discusses the cyclical relationship among the risk characteristics. He suggests that poor academic performance begins before students enter school as a result of lack of basic skills, emotional and/or family problems, or a lack of emphasis on school success as an individual, family, or cultural priority.

Retention is frequently a consequence of at-risk students' poor performance, according to Ruff, increasing the risk of alienation and isolation from peers.

There is general agreement among authors describing students at risk, with the greatest point of agreement that there are a myriad of factors which may or may not place a child at risk of negative behavior choices and consequences. Hawkins and Catalano (1992), through a review of existing research on risk factors coupled with their own work, have identified risk factors existing in the community, family, school, and individual/peer group. These factors are founded on research evidence that correlates these conditions/situations to increased risk-related behavior in young people. While Hawkins would allow that other factors may influence risk, these factors have been "proven" to be related to risk behaviors such as substance abuse, teen pregnancy, violence, school drop, etc.

The community risk factors include availability of alcohol and other drugs and firearms. Hawkins and Catalano (1992) found that even the perception of availability yielded increased drug use. Community norms and laws which are favorable toward use of alcohol and other drugs, firearms, and crime also is identified as a risk factor in the community. Transitions and mobility within the community also increase risk behavior; communities with high mobility rates have higher substance abuse and crime rates (Hawkins & Catalano). Another community risk factor is low neighborhood attachments and community disorganization, exhibited through vandalism and low public surveillance. The last factor identified in the community is extreme economic and social deprivation.

Hawkins and Catalano (1992) describe four risk factors for the family environment. Family management problems are defined as a lack of clear expectations, failure of parents to supervise and monitor their children, and excessively harsh or inconsistent punishment. Family conflict also contributes to risk. Hawkins and Catalano emphasize that the family structure (single parent, two working parent, divorce) did not contribute significantly to risk, but rather the conflict between family members was the contributing factor. A third risk factor

in the family is parental attitudes and involvement in crime and substance abuse; parent modeling and approval of abuse and violence contribute to increased risk behavior in youth. The fourth factor is similar to the third; a family history of high risk behavior contributes to risk in youth. Children who are raised in alcoholic homes are more likely to become alcoholic; those raised in homes with violence tend toward violent behavior; those born to teen mothers are more likely to be teen parents; and children of school drop-outs are more likely to drop-out.

The school is the third environment in which Hawkins and Catalano (1992) identify risk factors. Early and persistent antisocial behavior in school is a strong predictor of risk behavior in adolescence. Academic failure in late elementary school also increased the risk of substance abuse, delinquency, violence, teen pregnancy and school drop-out. The cause for the failure does not seem significant, rather the *experience* of failure is the predictor (Hawkins & Catalano). The third school-based risk factor is lack of commitment to school or lack of engagement in the school process.

Hawkins and Catalano (1992) also examined risk factors within the individual and the peer group. They found that alienation and rebelliousness predict risk behavior such as substance abuse, delinquency, and school drop-out. In addition, a peer group or friends who engage in the problem behavior increased the likelihood that the individual will exhibit risk behavior. An attitude of acceptance of risk behaviors on the part of an individual increases the risk of experimenting with and practicing the behavior. Finally, early initiation (age-of-onset) of the problem behavior increases the probability of chronic problems in later adolescence.

Hawkins and Catalano (1992) point out that all risk and problem behavior is age-related. Their research shows that these behaviors generally begin between the ages of 11 and 15, peak at age 25, and decrease rapidly after age 25 for most individuals. The implications of this finding are two-fold. First, the need for early prevention and intervention becomes clear, and the role of the middle school in the prevention and intervention process is vital as this is the critical time frame for initiation of problem behaviors. Second, the fact that these behaviors

generally do not continue into adulthood has implications for the adjudication system with regard to rehabilitation and incarceration of adolescents who exhibit criminal behaviors.

All the factors cited by researchers in the field of at-risk behaviors create an environment which is dangerous for young people and threatens successful development of positive coping skills. Most young people are exposed to at least some of these factors in their growth and development process. However, the degree to which they are exposed is the variable, yet does not emerge to be the deciding factor with regard to successful development. Clearly, some children are able to move beyond even the most severe risk factors and develop healthy, positive well-being. Their successful development appears to be related to their resilience and the role that certain protective factors play in the development of resilience.

Resilience

The profile of the at-risk student presents a comprehensive picture of those factors and characteristics which create the risk of school failure and its implications for future success. Over time, however, there have been many young adolescents for whom the conditions of risk existed and yet, these students did not experience school failure. Hauser, Vieyra, Jacobson, and Wertlieb (1989) state that "the majority of children exposed to various forms of adversity grow up to enjoy productive, "normal" lives" (p. 111). This ability to recover from adversity and live a healthy and productive life is labeled "resilience". Adversity may take many forms; such as childhood abuse, alcoholism and other drug abuse by primary caretakers or significant others, extreme poverty, chronic illness, natural disaster, or severe trauma. Regardless of the source of the adversity, those who experience trauma, recover from their experience, and move on to lead "successful" lives are considered to be resilient. The research on resiliency begins to explain the difference between those "at-risk" students who succumb and those who do not and, more importantly, what causes that difference.

Current trend in prevention strategies focuses on a proactive approach which attempts to promote positive coping strategies and life-skills in all youth rather than waiting until

intervention is necessary. Many studies and much discussion has focused on those children who succeed despite adverse circumstances which might mitigate their success. The concept of resiliency has been used to describe these youth, and the literature describes both these resilient children and the protective factors which appear to promote resilience.

The resilient child

Benard (1991) offers a description of the resilient child which can be contrasted to the at-risk description. She places these characteristics into four categories: social competence, problem-solving skills, autonomy, and sense of purpose and future. Resilient children exhibit social competence through prosocial behaviors such as empathy and caring, responsiveness and the ability to promote positive responses from others, flexibility, communication skills, and sense of humor. Resilient children, then, tend to develop more positive relationships with others in their environment and tend to be able to find positive ways to look at situations, even negative situations. Seligman (1992) labels this ability to create positives out of negative circumstances "learned optimism." He suggests that these optimists tend to see bad events as temporary, defeat as just a setback and not their fault. Optimists are healthier and live longer than pessimists (Seligman, 1992). Seligman suggests that explanatory style, the manner in which one explains why events happen, influences optimism and pessimism and how one deals with problems.

The resilient young adolescent demonstrates problem solving skills including the ability to think abstractly, reflectively, and flexibly and attempts alternate solutions for cognitive and social problems (Benard, 1991). These problem solving skills are frequently evident in the resilient child in early childhood, yet they are skills which clearly can be learned and nurtured in children to promote resilience.

The third characteristic of resilient young adolescents is autonomy. Benard (1991) references a number of authors who have used varied labels for autonomy such as sense of independence, internal locus of control, sense of power, self-esteem, and self-efficacy.

Benard summarizes that autonomy is "a sense of one's own identity and an ability to act independently and exert some control over one's environment" (p. 4). An ability to distance oneself from the negative circumstances, such as a dysfunctional family, is an example of a form of control over the environment. Distancing involves the ability of people to distinguish the self as different from the situation and recognize they are not the cause of the circumstances. This ability allows the resilient child to see a different future than one which repeats the present circumstances.

This sense of future and purpose comprises the fourth set of characteristics of resilient children, and the most powerful predictor of positive outcome (Benard, 1991). Young adolescents with a sense of purpose exhibit "healthy expectancies, goal-directedness, success orientation, achievement motivation, educational aspirations, persistence, hopefulness, hardiness, belief in a bright future, a sense of anticipation, a sense of compelling future, and a sense of coherence" (Benard, p.5). High achievement orientation and educational aspirations have been found to have extreme protective influence on resistance to peer pressure for alcohol consumption (Brook, Nomura, & Cohen, 1989) and on high school graduation (Newcomb & Bentler, 1986).

A sense of purpose and future is a dichotomous variable to Seligman's "learned helplessness" (1982). In his research he explored developing helplessness in individuals by creating situations in which the actions of the individual did not influence the consequences, yet some individuals in his research did not become helpless but rather were resilient despite the same stimulus conditions and consequences. He concludes that resiliency characteristics can be learned and fostered in young adolescents. Benard (1991) suggests that those who exhibit resilience have been provided reinforcement for those behaviors from either the family, the community, or the school.

Werner and Smith (1989) examined risk and resilience in adolescents and included comparative descriptions of male and female adolescents. They found that both resilient males

and females had better verbal communication skills than comparable adolescents who developed behavior problems. The resilient youth in Werner and Smith's study were not unusual in scholastic ability, but they were unique in the application of the attributes they did possess. "They were responsible, had internalized a set of values and made them useful in their lives, and had attained a greater degree of social maturity than many of their age-mates who grew up under more favorable circumstances (Werner & Smith, 1989, p. 89). In addition, Werner and Smith's resilient youth (both male and female) were described as appreciative, gentle, nurturant, sensitive, and socially perceptive; attributes which are traditionally labeled "feminine" (p. 89).

While the resilient males in Werner and Smith's (1989) study had developed qualities of a feminine nature, the resilient females also had developed qualities which allowed them to take a more instrumental role. They were "more assertive, autonomous, independent, poised, self-assured, and vigorous than adolescent girls with serious coping problems" (p. 90). Resilient females possessed an internal locus of control, feeling strongly that their actions determined the outcome of events in their lives.

Werner and Smith (1989) conclude that "the resilient youth [in their study] appear to have come as close as any people...to a health androgyny" (p. 93). While many of their peers were influenced and guided by the "societal stereotypes that define men and women", the resilient youth had "become whole persons instead, their own persons, and they were well on the road to that wholeness and individuality as infants and young children" (p. 93).

Garmezy (1992) studied resilient disadvantaged Black children and found the following characteristics: social skills evident in peer relations as well as with adults; a sense of power; positive self-regard; cognitive skills; a reflective problem solving style; goal-directed behavior; high aspirations; well-defined parent and child roles; and parental awareness of the child as an individual. Both Garmezy and Werner (1992) define the protective variables of resilience as

those within the temperament of the individual, those within the family of the individual, and those within the external support structures available to the individual (p. 421).

Beardslee and Podorefsky (1988) address resilience factors within the individual when examining adolescents with parents who have serious psychiatric disorders. The resilient youth in their study were able to distinguish between their own experiences and those of their parents and were able to recognize the problems of their parent(s) and conclude that they were not the cause (p.66). This is the same ability referred to by Benard (1991) as distancing. They were further described as "doers and problem solvers" with a "deep pride and sense of efficaciousness in their actions" (p. 67).

Protective factors

An analysis of the risk factors would indicate that often it is either the family through alcoholism, divorce, chronic illness, or other dysfunction; the community through poverty, violence and crime; and/or the school through lack of resources, inappropriate curriculum, instructional, or assessment strategies; which contributes to risk. Yet, when one or more of these environments presents a major risk for young adolescents, the remaining environment(s) have been found to offer protective factors which promote resilience within the child (Benard, 1991). These protective factors have been categorized by Benard into three characteristics: caring and support, high expectations, and opportunities for participation.

Hawkins and Catalano (1992) define these protective factors as opportunities to contribute, skills needed to participate, and recognition for their efforts. Their Social Development Strategy model also includes the need for protection afforded by healthy beliefs and clear standards and by bonding–attachment and commitment to the community, family, school, or peer group. Hawkins and Catalano emphasize the importance of the interaction among the protective factors for the healthy development of the child. Clear expectations may be communicated without enhancement of bonding resulting in alienated compliance.

Opportunities for participation may be offered; but, without the skills necessary, the young person will not be able to succeed and receive the positive recognition for participation.

Benard (1991), Hawkins and Catalano (1992), and others all stress the importance of putting the protective factors into the setting within which the growth and development of young people is accomplished. These factors must be operationalized into the world of the adolescent in order to provide the early prevention and intervention needed. Each of these protective factors is reviewed within the context of the three environments: the family, the community, and the school.

The family

Benard suggests that "a powerful predictor of the outcome for children and youth is the quality of the immediate caregiving environment" (1992, p. 6). Hauser, Vieyra, Jacobson, and Wertlieb (1989) suggest that the family role in the development of resilience is both direct and indirect. Direct effects of the family are defined as factors such as communication patterns, discipline models, parenting style, and physical aspects of the home. Indirect effects include the interaction between the personalities of the youth and the parents; the genetic influence on intelligence of the child; the relationship between high self-esteem of the child and high self-esteem of the mother, low parental conflict, and shared decision making between the parents (Hauser, Vieyra, Jacobson, & Wertlieb, 1989).

Extensive literature has established that a single common thread among resilient people is the development of a "close bond with at least one person (not necessarily the mother or father) who provided them with stable care and from whom they received adequate and appropriate attention" (Garmezy, 1984; Rutter, 1984; Werner, 1992; Werner & Smith, 1989, 1992). The social relationships within the family offer the child protection from risk factors; this even includes dysfunctional families if one adult or parent provides that good relationship for the child (Baumrind, 1985 in Benard, 1991; Feldman, Stiffman, & Jung, 1987). With regard to young adolescents, Brook, Whiteman, Gordon, Nomura, and Brook (1986) found

that a positive relationship characterized by affection and lack of conflict between the adolescent and parent resulted in less alcohol and other drug involvement, a behavior consistently identified as a high risk factor. Elkin and Handel (1989) suggest that another aspect of this relationship is the role modeling that the significant adult provides for the child. The child learns behavior through the example of the adult as well as through the feedback and nurturing provided by the adult. The nature of the relationship rather than the structure of the family seemed to be the critical factor such that divorce or intact family did not emerge as the predictor for risk behaviors, but rather the level or degree of conflict among the significant adults in the child's life predicted risk (Hawkins & Catalano, 1992), and the social support afforded the child while exposed to stress situations served to mitigate the negative effects of the situation (Benard, 1991).

High expectations within the family also mitigate the risk factors young adolescents experience and help develop resilience. Research with children from poverty who have performed successfully in school and the adult world of work indicates that high parental expectations which are communicated to the child correlates with successful, resilient behaviors (Williams & Kornblum, 1985). These high expectations are communicated not only through direct discourse, but also through the structures, rules, and clear behavioral expectations which are a part of the discipline of the family (Benard, 1991; Hawkins & Catalano, 1992).

Participation which results in the child's feeling bonded to the family through making a significant and integral contribution to the family has been shown to mitigate risk behaviors (Werner & Smith, 1992; Kurth-Schai, 1988). Giving children responsibilities which foster a feeling of self-reliance and self-efficacy enables them to trust their judgment when faced with decisions regarding response to risk situations (Glenn & Nelson, 1989). Glenn suggests that this is accomplished through overtly demonstrating that certain tasks could not be completed or functions accomplished without the participation of the young person as well as through

participation and autonomy of the child in decision making which directly effects the well-being of the family and the child.

The community

Families, which do or do not provide a young adolescent with caring and support, high expectations, and/or opportunities for participation, do so within the context of a community which also has the potential to promote resiliency through building social competence, problem-solving skills, autonomy, and a sense of purpose and future. Communities utilize formal and informal networks to create a culture of caring and support. Linquanti (1992) suggests that collaboration among community agencies and entities enables families and children to have access to the resources necessary for caring and support. Social support can be provided within the community by friends, neighbors, and caregivers as well as social institutions such as health agencies, religious institutions, community action agencies, civic groups, law enforcement and justice systems. Poverty consistently emerges as the greatest risk factor, and lack of access to the resources for basic necessities mitigates against a caring and supportive community (Benard, 1991; Hawkins & Catalano, 1992).

High expectations of the community for the youth are manifest in the cultural norms of the community. Benard (1991) identifies cultural norms which have direct relevance to resiliency factors. Essentially, cultures which value their youth as vital resources to society rather than problems develop resilient young people. Hawkins and Catalano (1992) also include community norms and beliefs as a significant risk/protective factor, citing the need for healthy beliefs and clear expectations. Stephen Glenn's work proposes three perceptions and four sets of skills which are inherent in the development of capable people, or resilient people (Glenn & Nelson, 1989). The third perception is that of meaning and purpose. Glenn and Nelson suggest that three conditions are necessary for young people to have a sense of meaning and purpose: 1) To be listened to (understood); 2) To be taken seriously with respect to feelings, thoughts and ideas (accepted); and 3) To be genuinely needed as an asset or unique

contributor (affirmed). Societies which do the above things practice the norm of valuing youth as a resource and thereby, promote resilience among young people.

The converse of this norm is societies that do not value their young people and the resulting message that young people have no contribution to make to the society until they become adults. Kurth-Schai (1988) and Hedin (1987) each discuss the connection between high expectations for youth and the opportunities a community offers youth for meaningful contribution to the community. When the community does not perceive youth as resources, they are not included in problem solving and solutions. Many communities view the youth as a problem and expend vast energy and resources attempting to resolve the problem without engaging the youth in the process. The norm in those cultures may be to do things *for* and *to* the youth but rarely to do things *with* the youth.

Communities that perceive youth as capable of making meaningful contributions naturally provide youth with the opportunity to participate and be involved in solutions to problems rather than as the source of problems. Not only does this benefit the community as children increase the resources available to the community, but also it creates a situation where the development of the youth is facilitated. According to Kurth-Schai (1988) the development of a strong sense and social commitment in children is contingent upon utilizing and enhancing their potential to contribute to society. Hawkins and Catalano's (1992) Social Development model emphasizes the need to focus all prevention activities in ways that promote attachment and commitment for the youth. Opportunities to participate offer youth the vehicle through which they may feel bonded to the community, connected to other people and a part of a larger purpose than themselves (Benard, 1991).

The networking of community resources to provide opportunities for youth to participate in meaningful service is critical to development of competence, within the community as well as the youth. William Lofquist has suggested that "only when adults view and respect young people as resources from the time of their birth are we likely to create

organizational and youth opportunity system cultures that in fact promote the well-being of young people" (Lofquist, 1992). The creation of these system cultures, or networks, of participation for youth results in a culture which promotes resilience in youth.

The school

Just as the family and the community contribute to resiliency through protective factors, the school can play a crucial role in the development of resilient children. Michael Rutter's work in the schools of London in the 1970's still stands as a seminal work on the role of school's in the development of positive coping strategies in children (cited in Benard, 1991). The schools in Rutter's study which appeared more successful in promoting positive behaviors among students all exhibited the following characteristics: academic emphasis, clear expectations and regulations, high levels of student participation, and many, varied resources.

Garmezy (1992) speaks to educators, suggesting that the "appropriate role is to think of oneself as a protective figure whose task is to do everything possible to enhance students' competence" (p. 429). Protective factor research parallels effective schools research in the identification of characteristics of schools which promote resiliency through protective factors (Benard, 1991; Hawkins, Catalano, & Miller, 1992). As in families and communities, those protective factors are a caring and supportive environment, high expectations, and opportunities for meaningful participation.

The level of care and support within the school environment is a powerful predictor of resilience in youth (Benard, 1991). Werner (1992) cites two studies in which the role of the teacher as that of a significant adult which provided a positive role model, stable care, and adequate and appropriate attention was critical in the positive outcome for children who experienced seriously adverse circumstances (Moskovitz, 1983; Pederson & Flaucher, 1978, cited in Werner, 1992). Noddings (1988) concludes that schools may be the last bastion of hope for some children and that acceptance of this role by the schools could enable the primary mission of the schools, the cognitive development of the child. "At a time when the traditional

structures of caring have deteriorated, schools must become places where teachers and students live together, talk with each other, take delight in each other's company. My guess is that when schools focus on what really matters in life, the cognitive ends we now pursue so painfully and artificially will be achieved somewhat more naturally...It is obvious that children will work harder and do things–even odd things like adding factions–for people they love and trust" (Noddings, 1988).

Another aspect of caring and support which the school can facilitate and foster is that of peer support, which has been shown to be as important to resilience as adult support (Benard, 1991). Meta-analysis performed separately by Tobler and Bangert-Downs of research related to alcohol and other drug use reveals that "peer programs (including cooperative learning strategies) are the single most effective school-based approach for reducing alcohol and drug use in youth" (cited in Benard, p. 10). The role of the school in creating a caring and supportive environment, then, is two-fold involving adult support and peer support.

Equally important and highly related to care and support is high expectations for youth from adults and peers within the school environment. The work of Rutter (cited in Benard, 1991), discussed earlier, and Brook et al (1989) demonstrates the power of high expectations in mitigating against risk factors. Brook found that high expectations from adults within the school along with student participation and autonomy even counteracted the influence of a using peer group in adolescent alcohol and other drug use.

Many authors discuss the effects of tracking, between-class grouping of students according to perceived ability, on student achievement with the conclusion that this practice does not enhance the academic success of high and/or average achieving students and does significant harm to low achievers (Black, 1992; Crosby & Owens, 1992; Oakes & Lipton, 1992; Schmidt, 1992). Tracking has emerged as an equity issue in education as studies have found that low-ability tracks are populated by a disproportionate number of minority students (Crosby & Owens; Oakes & Lipton). Expectations are inherent in the practice of tracking with

high expectations for the high achieving groups and low expectations for low achieving students. Jonathan Kozol (cited in Benard, 1991) illustrates the equity issue related to tracking and expectations of the school in describing the experience of desegregation efforts in the Boston public schools. A portion of the black children from disadvantaged neighborhoods in inner-city Boston were bused to predominantly-white Lexington while others remained in the inner-city public school. "Virtually every non-White child bused to Lexington from Boston finishes 12 years of school and graduates; most go to four-year-colleges. Low-income Black children of the same abilities, consigned to public school in Boston, have at best a 23 percent chance of the same success" (Kozol cited in Benard, 1991).

The internalization of high expectations results from clear messages and feedback related to those expectations from adults and peers within the school environment. Young people who develop high expectations for themselves develop the characteristics of resilience.

The school setting offers varied opportunities related to the third protective factor contributing to resilience, namely, participation and involvement. Traditionally in education, involvement has been defined by the amount of participation in extra-curricular activities. The concept of participation and involvement as a protective factor mitigating against risk encompasses the entire educational process, going beyond the activities program into the classroom, and is closely related to "engagement" of the student in the educational process. Rutter (1984) found that successful schools tended to give children a great deal of responsibility. A variety of opportunities were presented to ensure that all kids found something they were interested in and at which they could succeed. Wehlage (1989) challenges schools to engage youth by providing opportunities for meaningful, valued activities and roles within the instructional program.

The curriculum and instructional strategies selected to deliver the curriculum influence the opportunities for participation in the school setting. Kurth-Schai (1988) suggests that curriculum should enhance creative thinking, critical analysis, and social problem-solving skills

and should emphasize learning experiences which are youth-directed, cross-generational, exploratory, integrative, cooperative, and action-oriented. In addition, Kurth-Schai suggests valuing the contributions of youth through allowing the "*educatorchild*" to provide instruction, beyond peer-tutoring, as well as opportunities to participate in the "design, selection, and implementation of curriculum, evaluation procedures, and motivational strategies" (p. 124). The "*scholarchild*" would design and implement research through a process of action research which "might help to generate more accurate and inclusive theories of child development, and more effective and productive approaches to teaching and learning" (p. 124).

Participation and involvement enhances bonding or sense of membership for students. Arhar (1992) notes that social bonding has four elements: attachment, commitment, involvement, and belief. Glasser (1990) and Sarason (1992) point to the need to belong as a basic human need which can only be achieved within the school setting when a sense of purpose and future, autonomy, and social competence are enhanced. Coincidentally, Benard (1991) has identified these as three of the four characteristics common to resilient youth. Participation and involvement in the total school program acts as a powerful protective factor against risk.

The ideal environment for all youth would be one in which family, school, and community worked in synchronicity to develop capable children through a caring and supportive culture characterized by high expectations and opportunities for meaningful participation and involvement. The outcome of a childhood spent in this environment would be resilient young people who possess problem-solving skills, social competence, autonomy, and a sense of purpose and future. The relationship of these protective factors and resiliency characteristics to engagement in the educational process is inherent in the basic human need for social bonding.

Strategies for Resilience

The range of program options for students at risk moves from total pull-out programming in the form of special classrooms or alternative schools to total inclusion with all support and intervention facilitated by the classroom teacher. There is some controversy with regard to the benefits and costs of various types of programming in terms of the impact upon the student. Benard (1991) discusses the effect of labeling on children in the context of encouraging programming based on resiliency factors rather than risk factors. She states that the labeling process is a "demotivator to change" and appears to "blame the victim" rather than focus on the environmental issues that create the risk situation (p.4). Special and remedial education programs have, historically, involved separation of students from the general education classroom for delivery of specialized services. These programs often exacerbate the problems of the at-risk student due to the stigma conveyed and through moving at a slower pace with lower cognitive objectives (Sagor, 1992).

Recently, educators have been examining and implementing programs aimed at inclusion of identified special needs students for services within the general classroom. These programs are sometimes identified as "integration" or "blended services" (Sagor, 1992). The goals of this type of programming include:

"• To keep the classroom teacher as the primary manager of instruction,

- To keep the child with his/her peers,
- To engage the child with the regular curriculum and its higher level objectives,
- To support the attainment of CBUPO [feelings of competence, belonging, usefulness, potency, and optimism] for all, and
- To keep the remedial student from falling further behind (p.211).

Whether pull-out or inclusive, comprehensive or factor-specific, programming options attempt to compensate and ameliorate the risk situation through strategies aimed at development of skills and building positive self-concept.

Sagor (1992) offers strategies which can be used within the general classroom or within special pullout settings. These strategies are instructional and management strategies which are often included in current literature related to systemic change of the educational system, such as Mastery Learning, learning styles, cooperative learning, control theory, classroom management, etc. In addition, strategies and programs that are beyond the scope of the classroom are discussed including parent involvement, advisor-advisee programs, Student Assistance Teams, outcome-based-education, and school restructuring. Sagor makes a strong case for the rationale to use these strategies to mitigate risk and promote resilience.

Classroom and instructional strategies

A variety of instructional and learning strategies which foster student involvement and success are proposed. Brain-friendly learning is suggested by Brendtro, Brokenleg, and Van Bockern (1992). They define brain-friendly learning as experiential, social, pattern-making, and non-threatening. Mastery Learning also fosters feelings of competence and enables students to feel successful. Sagor (1992) identifies four critical variables for success: 1) motivation; 2) prerequisite skills; 3) quality of instruction; and 4) adequate time. Mastery learning is said to maximize the likelihood that these variables will be provided at the appropriate levels.

A sense of belonging is supported through the use of learning styles and multicultural curriculum. Sagor (1992) suggests use of curriculum which honors diversity, including cultural and gender issues will promote a sense of belonging for all students. In addition, becoming aware of and developing learning experiences based upon diversity of learning styles not only increases the sense of value and belonging for the students, but also facilitates success as learning opportunities are presented in the individual student's strong style.

Carrington Middle School, Durham, North Carolina, has taken a unique view of learning style and personalized instruction (Bunting, 1992). Using a neurodevelopmental approach, "Schools Attuned" attempts to categorize behaviors according to neurodevelopmental

dysfunction. Individual programs are designed for students which capitalize on strengths in order to compensate and remediate observed limitations. A critical component of the Schools Attuned approach is the process of "demystification–a procedure that helps students better understand their neurodevelopmental strengths and limitations" (p. 5). As a result of this program teachers apply a wide variety of instructional strategies for all students based upon what they have learned about neurodevelopment.

Sagor (1992) suggests that teaching strategies and high expectations have a significant impact on students' sense of belonging and feeling of competence. He cites the extensive research available describing differential teaching behavior and its effects on student performance. "Wait time", the length of time between asking a question and calling on a student for a response, emerges as a critical behavior in the student's perception of belonging; low achieving students generally receive shorter wait time while benefiting most from longer wait time.

A sense of usefulness, or sense of purpose, is fostered through "real" work and social utility (Sagor, 1992). The structured interdependence of cooperative learning strategies and cooperative team learning offer students opportunities to experience their social utility. Cooperative learning also minimizes unfair inter-class competition, places emphasis on group achievement, teaches skills needed to work effectively in groups, and fosters a sense of unity (Rogus & Wildenhaus, 1992). Use of cooperative learning as an instructional strategy results in a restructuring of the classroom (O'Connor, 1992; Hawkins & Catalano, 1992). The new structure of the classroom contains those elements and promotes the protective factors of resilience.

Community service provides students with experiences which are "real" in terms of their locale and function while providing a sense of usefulness. Brendtro, Brokenleg, and Van Bockern (1992) refer to this feeling of social utility as the "spirit of generosity." Kiner (1992), reporting on successful use of community service with middle level students, describes the

impact on the school climate. Students develop pride in helping others (a sense of purpose and usefulness), parents have a positive attitude about the school, and the community recognizes the significant impact of the contribution of the students.

In addition to a sense of usefulness and a sense of belonging, there is a basic human need for autonomy, independence, or power (Brendtro, Brokenleg, & Van Bockern, 1992; Glasser, 1986; Harris, 1992; Sagor, 1992). The discipline or management strategies and decision making structures within the school are most closely related to this sense of autonomy. Brendtro, Brokenleg, & Van Bockern discuss the empowerment of children and suggest that "discipline for responsibility" will foster self-discipline from within the young person rather than discipline imposed from without. Glasser (1992) offers the "class meeting" as a decision making strategy which involves the students in problem solving and the creation of the rules and guidelines for behavior management. Sagor proposes the use of Glasser's strategies along with a "Goal Setting/Achievement/Celebration Cycle. He suggests that classrooms functioning within this cycle promote the "teacher as coach, student as worker" model of instruction which results in a student's sense of autonomy. Harris also uses Glasser's Control Theory and 10 steps for discipline as the behavior management program of a summer school program. She states that "students must take responsibility of their own actions,...and fill out a plan of action to avoid the problem again (p. 5).

Systemic strategies within the school

Strategies which go beyond the individual classroom are considered to be systemic and include attempts to connect youth with the resources to support them in their development. Over a period of time, many initiatives have been employed with varying levels of success in mitigating against risk factors. Recent trends in programming take a proactive prevention approach which seems to focus more on protective factors, as defined by Benard (1991,1993a) than on risk factors. These strategies may involve school-wide, district-wide, or community-based initiatives.

School-wide initiatives

Comer (1992) describes a collaborative effort involving parents and school staff. The structure of the program involves a school planning and management team, a mental health or student services team, and a parents' program. The functions of the program are to develop a comprehensive school plan with goals in both the "social climate" and the academic areas, to provide staff development based on those goals, and to perform assessment and evaluation of the progress toward those goals. The overriding purpose of the program is to create a positive culture and a climate of positive relationships. With this foundation the guiding principles of the program include a "no fault" problem-solving approach, consensus decision making, and collaboration between the teams and the administration of the school. While this program was designed for and has been successful in improving the academic achievement of low-income children, Comer suggests that the basic principles and structures would be appropriate for any population.

The "Success for All" Project of Johns Hopkins University Center on Effective Schooling for Disadvantaged Students is another program developed for low-income, inner city youth (Sagor, 1992). The aims of this project are either prevention or immediate intensive intervention in reading problems. The structures of this project include reading tutors for one-on-one tutoring, Joplin Plan Reading which involves homogeneous groupings for reading instruction, assessment of student progress every eight weeks, a preschool program with emphasis on language development, a family support team, and a program facilitator. This project avoids special education placement as the project is designed to ameliorate reading difficulties within the context of the regular classroom.

Each of these projects includes a major emphasis on parent involvement, and, in fact, the Success for All Project patterned its parent component after the work of Comer. Sagor (1992) stresses that it is the nature of parent involvement which is the critical issue, not just the existence of involvement. On a continuum from parents as passive participants to active

participants, Sagor notes that active participation by parents may have a positive effect on student achievement and the development of resiliency characteristics, while passive participation has been shown to have only little if any significant impact.

Hawkins and Catalano (1992) suggest that the school can engage the family system in the prevention process through early childhood education which promotes language and reading skills, provides opportunities for active learning, and helps children learn how to manage their own behavior. Parent training, as a component of the educational process, should include increasing parent skill in those strategies for the early childhood education program as well as building positive ways to set and enforce clear rules. These parenting strategies will impact the risk factor of family management problems (Hawkins & Catalano).

Diversion initiatives are, also, a school-wide effort to prevent or intervene in risk-related behaviors. Diversion involves channeling first-time offenders into "alternative pursuits involving institutions of positive identity" (Sagor, 1992). Diversion has been successful as a strategy, due in part to the "real" quality of the activities into which students are channeled. These activities are not created for the at-risk student but are existing programs, such as athletics, theater, clubs, etc., with a positive identity separate from the diversion program.

Advisor-advisee programs are another program created for all students with a positive side-benefit of promoting development of positive relationships, peer and adult, for at-risk students (Glatthorn & Spencer, 1986; Hoversten, Doda, & Lounsbury, 1992; Rogus & Wildenhaus, 1992; Sagor, 1992). The advisor-advisee program serves as a vehicle within the school setting for the development of interpersonal skills; in addition, the role of the advisor is to become an advocate for the student and to develop a strong positive relationship with the student. The advisor is in a position to promote meaningful communication and active participation of the parents through conferences and other activities related to the advisory program.

Similar to the advisory program in concept, but created specifically for the at-risk student, is the Mentorship Program described by Owens (1992). This program is a component of the Student Assistance Program (SAP) and becomes an option for the SAP Team attempting to create positive interventions for students experiencing difficulties in the school setting. The Mentorship Program matches a troubled student with a concerned adult. The development of a positive, caring and supportive relationship provides the student with a role model. The role of the mentor is to "encourage,...discipline, serve as a model, and reinforce the teaching of life skills" (Owens, p. 34).

The "Adopt" a Student program at Jarrett Junior High in Springfield, Missouri, serves the same purposes as the Mentorship Program (Maggi, 1992). Created to meet a specific need, the Adopt a Student program pairs students experiencing poor academic performance and poor attendance with volunteer teachers. The teachers developed activities and relationships with the students with the result that student performance improved, not only in the areas of academic performance and attendance, but discipline referrals for participating students also decreased.

Assistance teams are another school-wide intervention mechanism for at-risk students. These teams have different names such as child assistance team, teacher assistance team, child study team, student assistance team, multidisciplinary team, etc. The primary goal of assistance teams is to enable teachers to meet the needs of students in the school setting. There are, however, two differing approaches to the assistance team process; one has a focus on the student and the other on the teacher. Teams which focus on the teacher attempt to offer consultative assistance to teachers who have identified specific students with whom they are experiencing difficulties (Sagor, 1992). The interventions suggested by the team tend to involve modification of the curriculum, instruction, and assessment in the classroom. On the other hand, teams with a focus on the student function by looking at a comprehensive picture of the student, beyond one classroom, and offer intervention and solutions which reach beyond

the individual classroom and tend toward systemic and, sometimes, community-based strategies (Anderson, 1987).

District-wide systemic strategies

Initiatives which involve entire school districts tend to be systemic in approach and more prevention than intervention oriented. These initiatives generally propose changes in the primary activities, the culture, and the structures of the educational process (Buford, 1992; Hixson, 1992; O'Connor, 1992; Sagor, 1992).

Sagor (1992) suggests that the comprehensive high school with diversity of curriculum does not appear to work for many students, and particularly not for at-risk students. He suggests that the lack of focus may appear to be a lack of purpose to the students. A core curriculum with adult agreement on curricular goals conveys the message of importance of the work being done in the school and translates to a sense of purpose and connectedness for the student.

Outcome-Based-Education is also proposed as a systemic initiative which allows students to see the purpose for their work (Sagor, 1992). Without endorsing a particular model, a process of reaching agreement on the specific knowledge and skills that must be possessed by students graduating from the educational system results in organization and implementation of the curriculum, instruction, and assessment in order to enable students to achieve those outcomes. Sagor suggests that use of the outcome based model grounded in commonly-held values and beliefs provides the environment in which at-risk students can succeed.

Another example of an outcome-based reform effort with a prevention focus is the Kentucky School Reform described by Buford (1992). The goals of the Kentucky Education Reform Act (KERA) are defined in terms of the knowledge and skills students leaving the Kentucky public education system should possess. According to Buford, the goals not only empower students to take responsibility for and ownership in their learning, but the systems-

reform also empowers teachers through site-based decision making giving teachers more control to develop the learning environment appropriate for the students in their schools.

Authentic/alternative assessment strategies are a natural complement to outcome-based strategies of instruction. The nature of authentic assessment allows students some autonomy in selection and development of performances to demonstrate knowledge and skill. "Being clear about the target" enables students to see the clarity of purpose needed for resilience (Sagor, 1992).

School restructuring efforts may include many of the previously discussed strategies and initiatives which foster resilience in at-risk students. School restructuring as a strategy in itself is also proposed as a prevention initiative (Hixson, 1991a, 1991b, 1992; Sagor, 1992). Multi-age groupings and Sizer's Essential Schools are suggested as two restructured models which have success with at-risk students (Sagor, 1992). Hixson (1992) takes a broader approach to restructuring when discussing the relationship of restructuring efforts to prevention of alcohol and other substance abuse problems in youth. He suggests curriculum, instruction, and assessment need to be changed to produce "desired changes in students' attitudes, skills, and knowledge..." (Hixson, 1991a, p. 7). Restructuring strategies should include the following:

- Becoming active in redefining the core mission of the school...
- Providing motivation and resources to assist teachers in redefining the content and process of effective instruction...
- Providing leadership in extending collaborative efforts between the school and the community...(Hixson, 1992, p. 9).

In light of the current trend toward restructuring or transformation of schools, this strategy may well form the foundation for creation of the school environment which promotes resilience in young people through the factors which protect against risk.

Hawkins and Catalano (1992) approach the protective factors within the school setting from an organizational change/improvement strategy. The School Development and Management model involves a team approach to organization and management of the school; the team includes parents, teachers, mental health staff, and administrators. A data-based monitoring process guides changes in school programs.

Community-based strategies

The protective school environment exists within and connects to the community environment. Another set of strategies to be considered in programming for at-risk students focuses on the entire community and attempts to build networks of support for young people. Felner, Mulhall, and Adix (1992), writing in the alcohol and other drug (AODA) prevention field, propose a new generation of prevention programs which involve developmentally-informed comprehensive initiatives. They suggest that these initiatives must "reflect a fully coordinated school-community approach. The approach must seek to address not only the child and his/her school experiences, but also the conditions in the family and community contexts" (p. 5). Felner, Mulhall, and Adix contend that programming for AODA prevention would be similar to programming intended to develop a competent workforce, increase family self-sufficiency, or reduce welfare dependency. They suggest that the strategies appropriate for these initiatives are unique to the community context of each initiative, and the planners of such programs must consider what "particularly hazardous educational, familial, or community conditions" youth encounter in their community (p. 5).

One strategy attempting to provide protective factors and promote resilience is the development of the school as a "hub around which to build coordinated, comprehensive human service and educational efforts" (Holtzman, 1992, quoted in Felner, Mulhall, & Adix, 1992). Illinois Project SUCCESS is one such effort which includes the transformation of the school as well as coordination of health and social service programs (Felner, Mulhall, & Adix). This state-level initiative involves local design of how and which services are to be delivered, parent

involvement, increasing the stability of families, access to basic health care, and access to proper nutrition and nutrition education. Comer's (1992) Social Development Program and Zeigler's School of the 21st Century are also examples of school-based community services initiatives (cited in Felner, Mulhall, & Adix, 1992).

Veale (1992) describes the development and implementation of School-Based Youth Services in Iowa. Services provided to youth through this pilot project, funded in four Iowa school districts, include primary and preventive health care, mental health services, employment and training, and school-related services such as tutoring, mentoring, and day care. With a goal of drop-out prevention and a focus on the whole child, these programs targeting middle and high school aged youth have been successful in raising the school achievement and attendance of the participants (Veale).

Community service is another strategy for offering youth opportunities for participation, the third protective factor in resilience. Kiner (1992) describes a middle school community service initiative and suggests the following factors for success: 1) short-term projects; 2) action-oriented activities; 3) participation of large numbers of students; 4) student involvement in planning; 5) school faculty support and guidance; 6) cooperation of classroom teachers; 7) fiscal responsibility; 8) intrinsic incentives; 8) communication between the school and local community service agencies; and 9) celebration of successful projects. Benard (1991) suggests community service as a powerful approach to engage youth in addressing the "social and environmental problems of the present and future" (p. 18).

Linquanti (1992) suggests that collaboration within the community will decrease or eliminate that fragmentation of efforts that frequently exists on behalf of at-risk youth. He argues that youth must be invited into the problem-solving process and viewed as resources rather than as the problem. Basing his strategies on Benard's resiliency model, Linquanti states that resiliency-based collaboration may be "the only way to create an environment

sufficiently rich in protection for kids facing the enormous stresses and risk of growing up in present-day American society" (p. 8).

Implications for Education

Schools play a major role in the development of resilience in young people as the research is clear that any one of the three environments, family, school, and community, can compensate for deficiencies and risk factors in the others. While there is some disagreement among educators as to whether the schools should take an active role in the amelioration of social conditions which create risk for young people, this body of research and literature provides strong support for the involvement of schools in the development of resilience.

Schools may have both a direct and an indirect influence of the protective factors of resilience. The direct impact with young people can be facilitated through the curriculum, instruction, and assessment strategies as well as support programming offered within the school setting. Indirect influence may be exerted on the protective factors within the other two environments through interaction with the family and through coordination and cooperation with community agencies and organizations functioning on behalf of youth and families.

Direct influences of the school

Many strategies and programs have been discussed in previous sections of this paper, yet many of them are applied only in isolated settings and most have not become the norm in American schools. Schools must examine their current practices against the protective factors and intentionally design the school program to provide those factors. The primary function of the schools remains the cognitive development of young people, therefore, these protective factors are most appropriately incorporated in the activities related to this development. Caring and support, positive expectations, and opportunities for participation must be designed into the everyday fabric of the public school systems and must be available to all children not just a select few.

Caring and support is exhibited, first and foremost, by a caring and supportive school staff. While most educators enter their profession because of a genuine concern for the welfare of young people, this is not always the case and is not always evident to the youth, even where it exists. A first step in providing caring and support for young people would be to ensure that all students are treated with dignity and respect by all school staff. The next step would be for all staff to ensure that all students treat each other with dignity and respect. This could be accomplished through establishment of ground rules for interactions in classrooms, such as 'No put downs', 'Listen to the speaker', etc. The development and implementation of a discipline system which is founded on fair and consistent treatment of all individuals in such a way that dignity is maintained also contributes to a culture of caring and support. This sounds simple but would require a major change in the culture of many of our schools.

Caring and support may also be provided through the structures of the school which enable each student to achieve success. Examples might include the availability of teachers and aides for extra academic assistance for students who experience difficulties with certain concepts and learnings. This extra assistance could also be provided through peers as tutors or teachers. Opportunities for assistance and extra instruction could be provided through learning centers available during free/study hall time as well as before and after school.

Another way to ensure success for all students is to provide alternatives in instructional methods as well as assessment strategies. Students feel caring and support when they are allowed and encouraged to experience successful learning opportunities which are compatible with their individual learning style and unique set of intelligences. Allowing students to demonstrate their knowledge in a variety of ways, such as writing, speaking, building or drawing models, and/or media presentations, opens the possibility of more students being successful in academic endeavors.

The interrelatedness of the three protective factors becomes apparent as many of the strategies for caring and support also provide positive expectations and opportunities for

participation. Positive expectations, like caring and support, become the task of the school staff. Communication of high expectations to students is accomplished through the assignments given to students, the discipline policies and practices, and the assessment and grading practices. The teacher-student relationship is not only the primary vehicle for demonstrating caring and support for students but also a major source of communication of high expectations for each student. School staff communicate their expectations through the conversations with students about their work, through the written feedback about students' work products, and through feedback to parents/guardians regarding students' progress. This feedback, in order to emphasize high expectations, needs to be specific to the event/product being discussed and include precisely what the student has done well in addition to specific suggestions for improved performance on the next task. Without this specificity, the feedback is superficial and, thus, meaningless to the student and the family.

High expectations are also communicated through the instruction, assignments, and assessment opportunities provided to the student. Two practices in schools which mitigate high expectations are tracking students into homogenous groupings based on perceived ability and placement of special needs students into segregated classes with separate curricula. In each of these examples, the message to the students in these programs is that less is expected due to their 'lesser ability'. A more desirable alternative is inclusion of all students (with the possible exception of severely disabled students who require one-on-one assistance to function at a minimum level) into heterogeneous classrooms which utilize instructional and assessment strategies carefully designed and selected to promote learning for all the students in the classroom. These strategies would include, but not be limited to, cooperative learning, authentic curriculum and assessment, performance-based assessment, integrated performance, interdisciplinary instruction, Models of Teaching (Joyce & Showers, 1992), and Dimensions of Learning (Marzano, 1992).

Perhaps the weakest of the protective factors in terms of implementation, and the most critical in terms of resilience, is opportunities for participation. Many programs and activities within the school are designed for youth to participate as "doers" of the activities. These would include athletics, instrumental and vocal music groups, theater and speech, cheerleading, and other activities considered to be extra-curricular.

While these are opportunities for youth to experience success, caring and support, and positive expectations within the school setting, they generally lack the critical component required to make them truly meaningful opportunities for participation, when defined as a protective factor for resilience. This critical component is the opportunity to be a "planner" and "decision-maker" rather than just a "doer" within these activities. Each of the activities listed above may offer some opportunities for planning and decision making if athletes are invited to develop their own plays and strategies and select when to employ them; musicians and actors/speakers are allowed to choose and perhaps even write their own selections for performance; cheerleaders create and implement their routines. Too frequently, however, the reality of these activities is that the adults-in-charge select the sports strategies, musical numbers, and theater productions for the student participants.

Another critical component necessary to make opportunities for participation meaningful as a protective factor is the interdependence between the participant in the activity and the recipients of the activity. The activity needs to have practical significance beyond the young people participating. Community service is a prime example of such an opportunity where youth can readily see that the service they are performing is necessary to the welfare of others and would be noticeably missed were it not performed.

Students can be given meaningful opportunities to participate in the decision making and planning of their schools both within the extra-curricular program and within the instructional program. Inviting students into the decision making process and, then, honoring and utilizing their ideas and suggestions is a first step. In the classroom this can be

incorporated into the instructional and assessment strategies being employed to promote caring and support and positive/high expectations through allowing students to design and perform their assessment performances as well as to allow them to participate in the design of the curriculum itself. Interdisciplinary instruction which involves the students in the selection of the theme to be explored, the questions to be answered within the theme, and the research process for studying those questions provides students with meaningful participation.

While many of the strategies for promoting resilience through application of the protective factors are being implemented in the schools, there is a great deal of room for improvement. Often these strategies are being employed in haphazard and disjointed fashion without a clear understanding of the purpose for their implementation. Changing the culture of the schools through carefully designed and well informed staff development may be the best defense for schools to employ in meeting the needs of all students, and thereby, mitigating against risk through promoting resilience in all young people.

Indirect influences of the school

While the school clearly has more opportunity to provide protective factors within the structures and programs of the school building and district; through its relationship with the family and the community, the school has the potential to have significant indirect impact on those protective factors within the other environments.

The school can indirectly effect the protective factors within the family through the interactions between school personnel and parents/guardians by explaining and suggesting behaviors which promote caring and support and high expectations for young people. Skill development and support/study groups for parents can be offered through the school to promote skills, knowledges, and attitudes which provide the protective factors within the family. These groups can include direct information regarding the importance of resilience and its relationship to the protective factors.

Similar skill, knowledge, and attitude strategies can be incorporated into the school curriculum for potential parents who are currently high school students in the system. These strategies can become a part of the curriculum through classes in the secondary school which address these concepts directly as well as through infusion throughout the K-12 curriculum as parenting is discussed in a variety of contexts.

The schools have potential to indirectly impact the protective factors within the community through relationships with human service agencies and the community at-large. Bringing access for families and students to human service agencies into the school building helps provide caring and support. This can be accomplished by having social services agencies, health care, and other service providers housed in the school building on a part- or full-time basis.

In addition, sharing information through coalitions of service providers which include the appropriate school personnel ensure that families and students get the support needed at critical times. Too frequently, the student assistance program is developing intervention strategies for a student at the same time that Department of Human Services is working with the family, and the juvenile justice system is working with the youth; yet, none is communicating plans with the others. Students and families find this adds to their risk and frustration rather than providing the caring and support needed for their success.

Community service, as mentioned previously, is another strategy through which the school can work with the community in providing protective factors for youth. The school can facilitate the time for students to perform community service while the community agencies and organizations can provide the meaningful activities necessary for youth to feel that their work is making a valuable contribution to the good of the community. Community service which the students design, make arrangements for, and deliver not only allows a meaningful contribution but brings students into the decision making and planning process as well.

A focus on resilience, rather than risk, offers a positive alternative promoting the development of high functioning young people and adults. Previous programming for at-risk youth which was designed around the risk factors inherently resulted in intervention rather than prevention. While certainly appropriate and helpful, intervention does not provide systemic solutions and tends to be a band-aid approach to problems which can only be solved through major surgery. Using heart disease as a metaphor, waiting until a heart attack has occurred and then prescribing bed rest when surgery to bypass a clogged artery is necessary is similar to the application of student interventions when the system within which the young person is developing is flawed. In the case of heart disease, a far better alternative is the development of a life-style prior to the heart attack which minimizes the risk of heart disease and maximizes the prognosis of recovery should a heart attack occur. This life-style is analogous to the application of protective factors within the family, school, and community to promote resilience in young people to minimize the possibility of risk situations and to maximize the ability to recover or adjust should misfortune or adversity occur. In a society and world where it is impossible to safeguard against all risk situations, the promotion of resilience is "as good as it gets" in human growth and development.

Student Engagement

Educational engagement is necessary in order for learning to take place (Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989). Student engagement involves a psychological investment in and effort toward understanding and mastering the knowledge and skills taught in the school (Newmann, Wehlage, & Lamborn, 1992; Wehlage, Rutter, Smith, Lesko, & Fernandez). Stevenson (1991) defines engagement as "a personal intellectual investment in learning that enhances a youngster's scholarly competence and confidence" (p. 14). Participation in academic work, intensity of concentration, enthusiasm or interest, and care in completing work are indicators of engagement and provide operationalization of the concept.

Need for Competence

Newmann, Wehlage, and Lamborn (1992) present a model of student engagement which depicts the interrelationships of the factors which promote engagement. The foundation of the student engagement model is a need for competence which "has been recognized as one of the most powerful bases for human action and motivation" (p. 19). Competence may be developed through academic performance but other forms of competence are also rewarding and motivating. Examples include physical or athletic performance, interpersonal skills, and musical or artistic excellence.

School Membership

School membership is the second factor contributing to student engagement in Newmann, Wehlage, and Lamborn's (1992) model. Arhar (1992) suggests that membership has four characteristics: 1) attachment, which is the bond that students feel to the others in the school, both staff and peers; 2) commitment to remain connected to the group; 3) involvement or participation in the activities of the group; and 4) belief in the goals or purposes of the group. Membership is developed through and enhanced by clarity of purpose, fairness, personal support, success, and caring (Newmann, Wehlage, & Lamborn).

Clarity of purpose requires an understanding on the part of the student as to the reason for the school. This is determined on an individual basis such that it is the particular school's purpose rather than a general understanding of the purpose of education. Wehlage, Rutter, Smith, Lesko, and Fernandez (1989) suggest that school work is not motivating for some students because it is not connected to a valued and explicit goal. Arhar (1992) refers to this understanding of the purpose of the school as a belief in the legitimacy of the school, a belief that participation in the school will lead to the individual student's desired goals. Clarity of purpose can be weakened by perceived failure to exemplify the purported goals and values of the school and/or by failure to define and pursue any specific goals (Newmann, Wehlage, & Lamborn, 1992).

Membership, or bonding, within the school is also facilitated by a sense of fairness. Students need to perceive that there is equity in "allocation of opportunities and rewards" (Newmann, Wehlage, & Lamborn, 1992, p. 21). The inclusion of all students is exemplified through the elimination of discrimination based on gender, race, culture, or socio-economic status throughout the school program. Equity of opportunity extends beyond the classroom, where all students must have access to challenging courses and good teachers, to the co-curricular programs and support services. There are subtle manifestations of inequity which serve to diminish the sense of fairness, such as failure to honor unique cultural backgrounds in the curriculum, failure to accommodate diverse family structures, and tracking of students into separate courses-of-study (Arhar, 1992; Newmann, Wehlage, & Lamborn; Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989).

In order to feel membership in the school, students must experience personal support (Newmann, Wehlage, & Lamborn, 1992). Personal support can be experienced as coming from teachers or from peers. An environment in which hard work is rewarded and mistakes are opportunities to learn provides personal support. In addition, cooperative learning is suggested as an instructional strategy which creates a supportive environment (Newmann, Wehlage, & Lamborn). Attachment and commitment are enhanced through a feeling of personal support (Arhar, 1992).

Success is the fourth factor contributing to school membership (Newmann, Wehlage, & Lamborn, 1992). The development of competence which leads to success is critical to the engagement process. Schoolwork needs to present a challenge to the student while ensuring that successful performance will be possible. A feeling of success requires that there is recognition for successful performance; this recognition must be provided for all students, not just the exceptional (Arhar, 1992; Newmann, Wehlage, & Lamborn).

Caring is the final element which contributes to school membership (Newmann, Wehlage, & Lamborn, 1992). Caring supports the development of attachment to the group and

results in a commitment to the group (Arhar, 1992). Caring is demonstrated through the affirmation of each student's moral worth and dignity in both academic and extra-curricular arenas. A general climate of caring forms the nest in which fairness, clarity of purpose, support, and success are nurtured in order for students to experience school membership.

Authentic Work

The third component of student engagement is authentic work, defined as "meaningful, valuable, significant, and worthy of one's effort" (Newmann, Wehlage, & Lamborn, 1992, p. 23). Characteristics of authentic work include extrinsic rewards, intrinsic interests, a sense of ownership, connection to the "real world", and fun.

Many at-risk students perceive little reason to work hard in school because they see little or no relationship between academic achievement and subsequent employment (Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989). Academic success, as currently promoted in American schools, is closely aligned to college entrance, a goal toward which few at-risk students strive. Extrinsic rewards are an element of authentic work which promotes engagement (Newmann, Wehlage, & Lamborn, 1992). These rewards may take the form of grades, admission to higher education, acquisition of jobs, increased income, and increased social status. Some of these rewards are long-term or delayed which mitigates their effectiveness for some students and increases the difficulty for the school in offering extrinsic rewards to promote engagement (Newmann, Wehlage, & Lamborn).

Intrinsic interest is found in those things that a student finds more "stimulating, fascinating, or enjoyable" than other topics of study (Newmann, Wehlage, & Lamborn, 1992). Tasks which allow students to express diverse forms of talent provide opportunities to meet intrinsic interests. In addition, learning as a socially shared process in which cooperation produces socially valued outcomes enhances intrinsic interest (Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989).

Learning activities which are characterized by intrinsic interest are also likely to foster a sense of ownership (Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989). Students need some control and influence over their work in school from its conception, through execution, and ending with evaluation of the performance (Newmann, Wehlage, & Lamborn, 1992). While there are limits to the amount of control students may have over the content of academic work, it is possible for schools to provide autonomy in both the way the work is accomplished and the way the learning is applied.

In order for work to be authentic, students must perceive its connection to the "real world" (Newmann, Wehlage, & Lamborn, 1992). Four qualities of work in the adult world of work which are often not present in school work are: 1) value beyond the instruction, 2) clear and prompt feedback of the quality of work, 3) collaboration with other workers, and 4) flexible use of time. The incorporation of these qualities into school work enhances student engagement.

The final characteristic of authentic work is that it is fun (Newmann, Wehlage, & Lamborn, 1992). In order to break the stress of pressure to succeed or the boredom from unchallenging, but necessary, routines; humor, play, and imaginative activities can be incorporated into the school day for students. When the learning activity requires a more serious approach, the play can be provided during a break or another part of the school day (Newmann, Wehlage, & Lamborn).

The result of meeting a need for competence, developing authentic work, and promoting school membership is student engagement in the educational process. Newmann, Wehlage, and Lamborn's (1992) model for engagement shows the relationship among these concepts (see Figure 2.1).

Motivation of students is closely related to engagement as characteristics of motivation are operationalized in engagement. Maehr and Midgley (1991) suggest that task-focused goals which promote understanding, insight, or skill development, increase engagement.

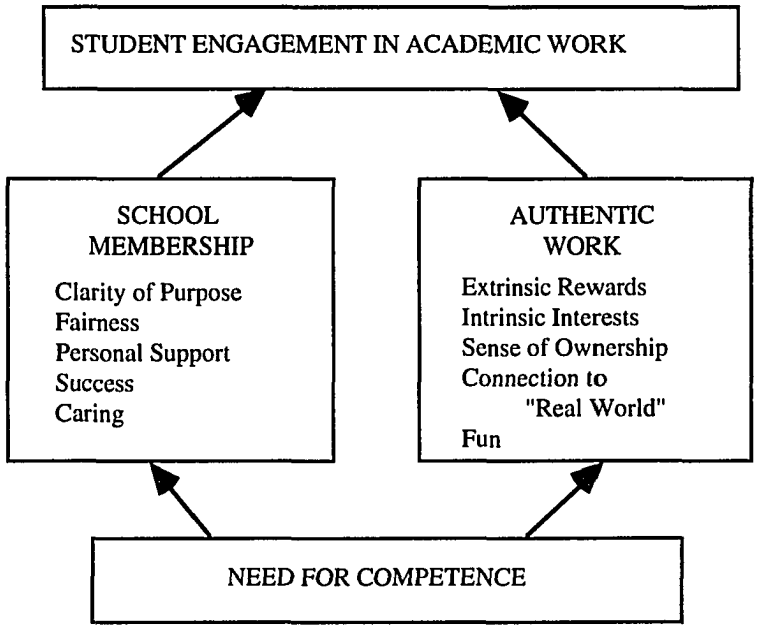


Figure 2.1 Factors that influence student engagement in academic work (Newmann, Wehlage, & Lamborn, 1992, p. 18).

Characteristics of a task-focused activity include students involve in decision-making, peer interaction and cooperation, grouping based on needs and interests, and success defined in terms of progress, improvement, and effort. The approach to developing learning environments in which these conditions exist and students are engaged in the academic process must focus reform of the policies and practices of the school, not on changing the learner (Maehr & Midgley).

Tobin (1984) makes a distinction between covert engagement and overt engagement. Overt engagement is active observable involvement in a learning activity while covert engagement is attending to or thinking about a learning activity. Covert engagement is not readily observable and must be inferred by the observer. In his study of middle school science

teachers, Tobin found that engagement was higher in classes where teaching methods were matched to objectives and learners, where transitions between learning activities were well coordinated and involved short periods of time, where teachers gave clear explanations and directions, where materials and equipment allowed students hands-on practice, where a variety of teaching strategies were employed, and where assessment was used to determine if students had received sufficient practice.

Stevenson (1990) used interview techniques with high school students to determine what academic activities they identified as engaging in social studies classes. These students reported that they were engaged by activities which allowed them to participate actively in thinking and to use ideas and values, rather than simply "acquire facts and generalizations" (Stevenson, p. 339). "Making inferences and value judgments was more interesting, worthwhile, and challenging than acquiring information" (Stevenson, p. 340). Stevenson suggests that student engagement in the high school will not be enhanced through increased graduation requirements or tough grading practices, but rather through intrinsic motivation strategies including interesting subject matter, active student participation in decision-making, and challenging academic tasks.

Further support of the student engagement model is found in a study of self-regulated learning by middle school students in science and English classes (Pintrich & De Groot, 1990). Findings of this study indicate that self-efficacy is positively linked to cognitive engagement and performance. Intrinsic motivation was also found to result in cognitive engagement in attempts to comprehend material being studied. Student engagement was concluded to be closely tied to students' beliefs about their ability to succeed and their beliefs that the academic activities were interesting and worth learning.

Meece, Blumenfeld, and Hoyle (1988) achieved similar results when studying fifth and sixth grade science students. Cognitive engagement was related to students' goal orientations with task-mastery goals resulting in more active engagement than ego/social goals. "Strong

concerns about the adequacy of one's ability or evaluation can increase a student's reported use of effort-minimizing strategies" (Meece, Blumenfeld, & Hoyle, p. 521). General academic ability did not significantly predict cognitive engagement. Individual differences in students' intrinsic motivation had a stronger impact on engagement in small group activities than in whole-class activities which implies that teacher-directed activities require less self-management than small group, cooperative activities. Their study supports the importance of the learner in the engagement model as learners interpret "the demands of the learning situation according to their set of needs, values, and perceived abilities" (Meece, Blumenfeld, & Hoyle, p. 522).

The value of student engagement is clear when we accept that learning does not take place unless the student is engaged in the learning process. To promote engagement all factors within the model need attention. Students must be placed at the center of the learning process in order for school reform to succeed (Lipsky, 1992). In order to have real learning, the engagement of students in academic work must facilitate students in the construction of their own meaning (Farnan & Kelly, 1989). This is accomplished through personal instructional environments which excite the passions and interests of students.

Teacher and Administrator Influence

The role of the teacher and administrator in the educational processes of the school is complex and integral. While a complete review of these roles is beyond the scope of this literature review, an explication of the importance of teacher and administrator engagement in the academic process and teacher readiness to meet the needs of students and how these factors influence student engagement and resiliency is provided.

Teacher Engagement

There appears to be a reciprocal relationship between student engagement and teacher engagement (Louis & Smith, 1992). Students require engaged teachers for their commitment to learning, and teachers need students to be actively involved in learning in order to be

motivated to invest in the teaching process. "Teacher engagement is a critical step in the process of creating schools that increase student learning opportunities and improve student achievement" (Louis & Smith, p. 120). Four domains of teacher engagement are discussed by Louis and Smith: 1) engagement with the school as a social unit; 2) engagement with students as unique whole individuals; 3) engagement with academic achievement; and 4) engagement with one's subject.

Engagement with the school as a social unit is characterized by a sense of community among the school staff (Louis & Smith, 1992). An integration of personal and work lives is exemplified by attendance at after-hours school events, reference to colleagues and students as friends and family, a commitment to working in the specific school, and caring and support in times of crisis.

Engagement with students as unique individuals involves perceiving students holistically beyond the classroom. Behaviors which exemplify this type of engagement include teaching in ways that encourage and respond to students' thoughts, listening to and acting upon students' ideas, involving oneself in students' personal as well as school lives, and being available to students who need caring and support (Louis & Smith, 1992). Both formal and informal counseling, advising, and support services and programs are also examples of engagement with students.

Engagement with academic achievement is the third type of teacher engagement (Louis & Smith, 1992). An active commitment to their own learning including staff development and sharing ideas with other teachers indicates engagement with academic achievement. In addition, curriculum writing and development, using class time creatively, expressing high expectations for student performance, providing meaningful feedback to students, and actively considering student assessment strategies are examples of teacher engagement (Louis & Smith).

The fourth type of teacher engagement involves engagement with the subject and the body of knowledge needed to effectively teach (Louis & Smith, 1992). Manifestations of engagement with the content of teaching include keeping current with the literature, incorporating new ideas into teaching, making connections between the content and the students' lives, participating in professional organizations, and continuing the learning process through professional development classes and advanced degrees (Louis & Smith).

Teacher Readiness

Just as teacher engagement influences student engagement, teacher readiness impacts the successful implementation of change within the school (Fullan, 1991). This change may range from the adoption of a new teaching strategy to reorganization of the structures and practices of the school. Without readiness on the part of the teachers and administrators, the needs of students may not be met. A dictionary definition indicates that readiness is the state or quality of being prepared or equipped to act immediately; prepared in mind; unhesitant; willing; clever and skillful mentally and physically. "*Readiness* involves the school's practical and conceptual capacity to initiate, develop, or adopt a given innovation" (Fullan, p. 63). Readiness can be described in terms of individual factors, which relate directly to the teacher, and organizational factors, which involve the school as a whole. Both individual and organizational factors impact the readiness of the school staff to implement innovations which will benefit students.

Licklider (1994) has developed a model which depicts readiness for organizational change and incorporates the concepts of capacity, will, and self-efficacy. Capacity is one's ability to take action and includes knowledge and skill (Preparedness) and an understanding and acceptance of the need to act (Problem Acceptance). Will includes acceptance of responsibility for achievement of all students, willingness to change practices, and beliefs regarding the abilities of students to learn and excel (Student Potential Orientation). Sense of self-efficacy is the teacher's belief in his/her ability to make a difference and to perform

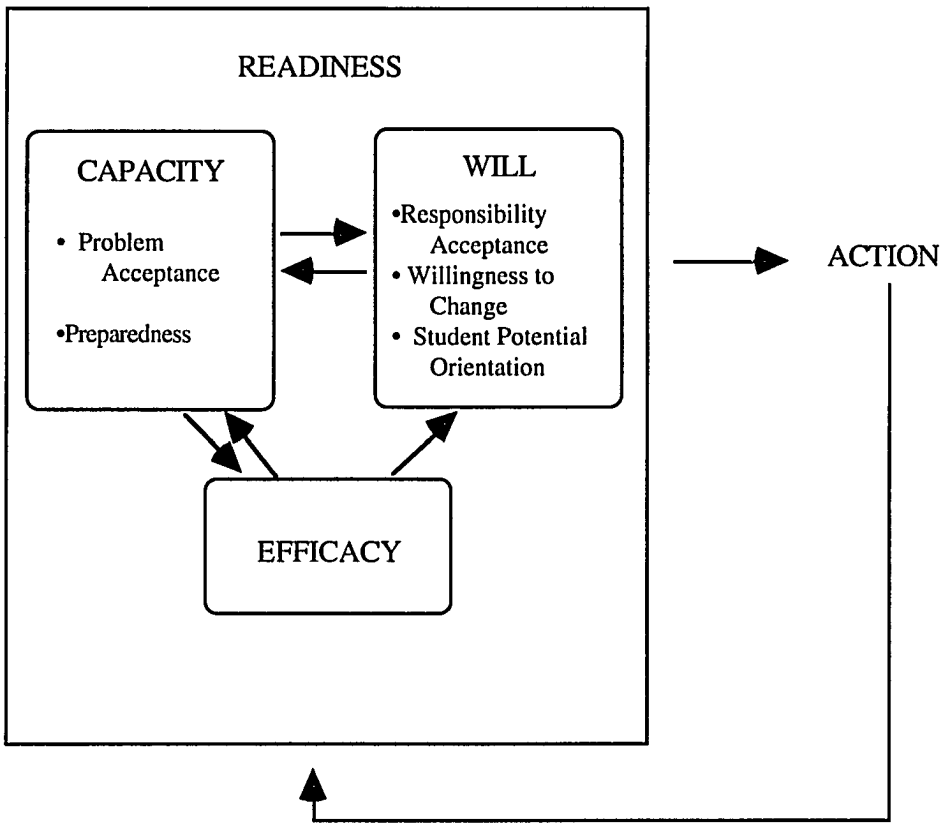


Figure 2.2 Factors that influence readiness for action (Licklider, 1994).

successfully. Licklider's model suggests an interrelationship among will, capacity, and sense of self-efficacy in the influence of readiness and that readiness is a prerequisite to action. Figure 2.2 depicts Licklider's model for teacher readiness to change.

This model suggests that capacity and efficacy influence each other and influence will. Additionally, will influences capacity. All three factors interact and work in combination to influence the individual teacher's ability to take action in the implementation of innovation.

This model, when applied at the school level, works in the same way to influence the school's ability to initiate, develop, or adopt innovation. The model further suggests that taking action results in future readiness and as such is a cyclical model.

In her study of rural Iowa teachers, Licklider (1994) applied the readiness for change model to, more specifically, readiness to meet the needs of at-risk students. She found that this model does offer insight into the actions of teachers in the implementation of strategies for at-risk students. Licklider reports a need to further examine the relationships between and among the components of readiness, however, the readiness model, at this stage in its development, provides a description of the readiness of teachers which includes the teachers' own perception of their capacity, ability to make changes; will, desire to make those changes; and self-efficacy, the belief that 'I' can make a difference.

Principal Leadership

The leadership role of the principal is an important factor in the school. Louis and Smith (1992) discuss ways in which the administrators of the school demonstrate leadership through facilitation of teacher engagement. Buffering teachers from unwanted outside interventions by parents or central office, visibility and availability throughout the daily routine, delegating and empowering teachers, confronting disengaged teachers, and providing leadership with regard to vision and values for the school are identified as exemplars of principal engagement.

Academic learning time, which involves and requires student engagement, can be enhanced by strategies and behaviors of the principal (Murphy, 1992). Engaged time is defined by Murphy as the "amount of instructional time in which students are actively involved in the learning activity" (p. 20). He then defines academic learning time as the amount of *engaged time* in which students experience success. The principal's role in increasing academic learning time involves buffering the classroom learning time from external interference; providing staff development opportunities; supporting teachers in their study of

academic learning time; promoting an orderly learning environment; and supervising teachers on the basis of student engagement.

Kouzes and Posner (1987) describe exemplary leadership which they also label as transformational leadership. They suggest that these behaviors are different than the behaviors of traditional leaders. Transformational leaders challenge the process by searching for opportunities to change and taking risks; they inspire a shared vision; they enable others to act by fostering collaboration and strengthening others; they model their values and beliefs; and they encourage the heart by recognizing contributions and celebrating accomplishments.

Summary of Theoretical Constructs

Four major concepts have been explored in this literature review; all relate to the theoretical construct of this research project. The student-centered middle school includes developmentally appropriate curriculum, instruction, and assessment practices; teams of teachers and students; a core of common knowledge; exploratory programs, advisory and support programs, co-curriculum programs; home/school partnerships; school/community partnerships; flexible scheduling; educators specifically prepared to work with early adolescents; and staff empowered to make decisions.

The discussion about risk focuses on both the characteristics of at-risk students and the environmental factors which place students at risk. Resilience is proposed as an important approach to risk reduction for students. It is pointed out that characteristics of resilient people include social competence, autonomy, problem solving ability, and a sense of purpose and future and that the protective factors which promote resiliency are a caring and supportive environment, high expectations, meaningful opportunities to participate, and skills to succeed. These protective factors can be innate within the individual and/or provided by the peer group, the family, the community, and/or the school.

Student engagement is defined as personal intellectual investment in and effort directed toward learning, understanding, or mastering the knowledge and skills that academic work is intended to promote, is grounded in students' need for competence, and influenced by school membership and authentic work. School membership includes attachment, involvement, commitment, and belief in the school goals. Membership is promoted through clarity of purpose, fairness, personal support, success, and caring. Authentic work is exemplified by extrinsic rewards, intrinsic interests, sense of ownership, connection to the "real world", and fun.

Teacher engagement in the educational process and teacher readiness to meet the needs of all students are related to student engagement and achievement. Engagement may take place through engagement with the school as a social unit, engagement with students as unique individuals, engagement with academic achievement, and/or engagement with the content or subject area. Teachers and administrators exhibit different engagement behaviors within each of these domains. Teacher readiness to meet the needs of all students is comprised of the capacity to act, the will to act, and a sense of self-efficacy.

Principal leadership influences teacher and student engagement and teacher readiness through the application of leadership behaviors. These include buffering teachers from outside intervention and supporting teachers through resources, visibility and availability in the daily operations of the school, building teams and confronting disengaged staff, delegating and empowering, and creating a shared vision and modeling the values and beliefs of the school.

The theoretical framework of this study suggests that the relationship of these concepts is highly complex in a way similar to the relationship of the parts of an atom. Resiliency forms the nucleus with the characteristics of resilience acting as neutrons and the protective factors acting as protons. The components of the student-centered middle school are the electrons revolving around the nucleus. The relationship is one of interdependence and interaction

among all elements of the model; student engagement is the energy which circulates through the model.

As with the atom, the removal of any of the component parts; protons (characteristics of resiliency), neutrons (protective factors), or electrons (components of the student-centered middle level school); does not cause the atom to split apart; but it does result in a completely different element (school environment). As the energy which holds the atom (model) together decreases (student engagement decreases), the influence (attraction) of the components upon each other is diminished; until, the absence of the energy (lack of student engagement) results in the atom coming apart.

Forces which act upon this atomic model include teacher readiness, teacher engagement, and principal engagement. These concepts have the power to pull the model apart by eliminating one or more of the components of the student-centered middle school or by diminishing the protective factors and resilience of students. These factors can also act to hold the model together through the implementation and strengthening of the components of the middle school and/or the protective factors which promote resilience in students. A graphic depiction of this theoretical framework is shown in Figure 2.3.

While the nuclear model depicts the theoretical framework for this study, a research framework which predicts the linear and reciprocal relationships between and among the concepts provides a more operational picture of this research study. With the student-centered middle school as the starting point, this research study must first describe the policies and practices of this construct. The influences of teacher and principal engagement and teacher readiness must be considered both in terms of their influence on the policies and practices of the student-centered middle school as well as their direct influence on student engagement and resiliency; it is proposed that there is reciprocity between and among these concepts as depicted by the arrows in the research framework. Student engagement is also proposed to have a

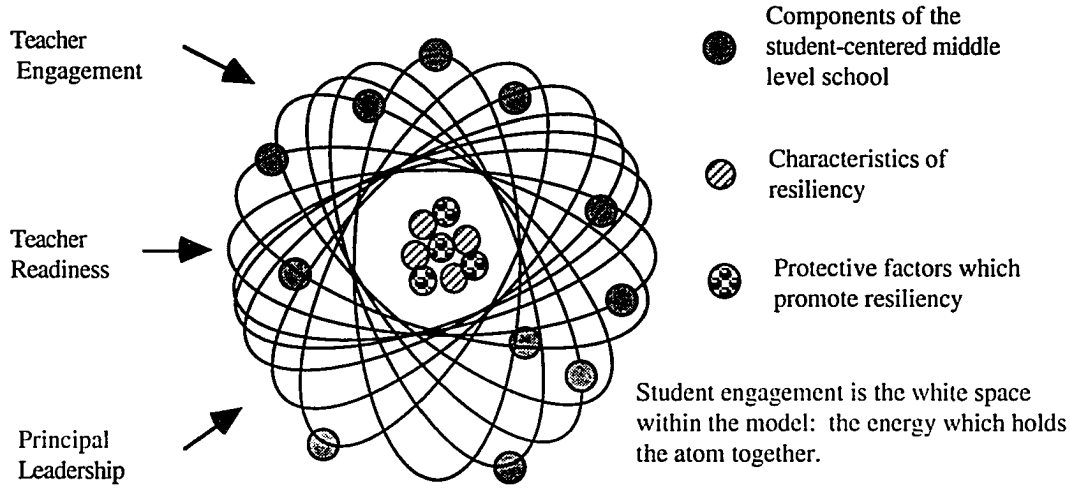


Figure 2.3. The theoretical framework depicting the "nuclear" relationships among the components of the student-centered middle school, the adult influences, student engagement, and the protective factors which promote resiliency.

reciprocal relationship to teacher engagement and teacher readiness. While the resiliency protective factors are a product of all of these factors. The complexity of these relationships becomes clear in the research framework (see Figure 2.4).

The model suggests that the student-centered middle level school influences all the other factors included in this study: teacher/administrator influences, student engagement, and the protective factors that promote resiliency. Within teacher/administrator influences, the factors of teacher readiness, teacher engagement, and principal engagement interact and influence each other. These factors in combination influence and interact with the student-centered middle level school and student engagement and, in addition, provide and influence the protective factors which promote resiliency. Student engagement while interacting with teacher/administrator influences, is influenced by the student-centered middle level school, and influences the protective factors which promote resiliency. The protective factors are provided by and influenced by all the other factors in this study; the student-centeredmiddle level school, teacher/administrator influences, and student engagement. As such, all these factors have indirect influence on the resiliency of students through the protective factors which directly influence resiliency. The end product of the model is students who demonstrate the characteristics of resiliency.

The interrelationships among these concepts has begun to emerge through this review of literature as common terminology is used to describe the essential components. For example, advisory and support services are considered essential to the student-centered middle school, caring and support is a protective factor in resilience, and caring and personal support are factors in student engagement. Connection to the "real world" and sense of ownership are elements of authentic work and are also descriptors of the developmentally appropriate curriculum of the student-centered middle school. The purpose of this study is to identify and determine these and other interrelationships among the concepts of the student-centered middle level school, the influences of teacher and principal engagement and teacher readiness, student

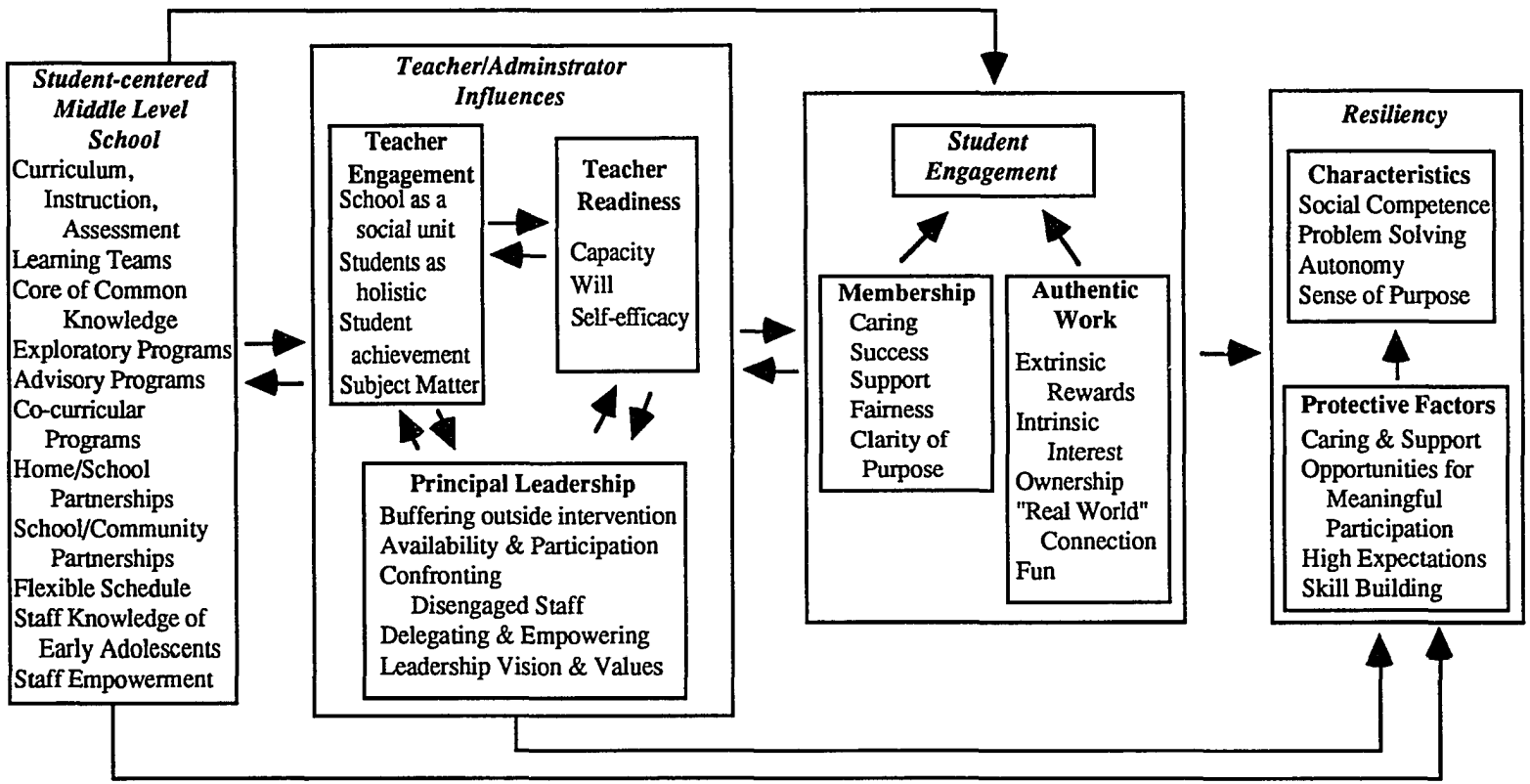


Figure 2.4. The research framework depicting the relationships among the components of the student-centered middle school, teacher/adminstrator influences, student engagement, and resiliency.

engagement, and the protective factors which promote resiliency. It is assumed based on this review of literature and prior research that the protective factors result in resilient young adolescents.

Case Study Methodology

The preceding discussion of the theoretical constructs of this study implies a complex relationship between the student-centered middle school, student engagement and resiliency, and teacher engagement and readiness. Case study research is appropriate to explore situations in which the causal links in real-life phenomena are too complex for survey or experimental strategies (Yin, 1984). In Case Study Research in Education: A Qualitative Approach, Merriam (1988) asserts that "research focused on discovery, insight, and understanding from the perspectives of those being studied offers the greatest promise of making significant contributions to the knowledge base and practice of education" (p. 3). The theoretical foundation of this study and the research questions examined appear to be most appropriately explored through case study methodology using both qualitative and quantitative data collection and analysis techniques.

This review of the relevant literature includes a review of the current practices and procedures within qualitative research which are appropriate to this study. When looking at complex phenomena within education, it is critical to recognize the social nature of schools. This complexity within a social setting indicates the use of direct interview and observation as a logical means to gain understanding of the phenomena being studied. This study was a case study of two middle level schools using interviews as the primary qualitative data collection technique and survey as the quantitative data collection technique. This review examines case study research; interviewing, both individual and group; and data analysis techniques to establish the appropriate application of these methods in this study.

Case Study Research

This research study examined the role of the student-centered middle level school in promoting student engagement and fostering resiliency; in addition, the influences of teacher engagement and readiness to meet the needs of students on student engagement and resiliency were considered. Merriam (1988) identifies qualitative case study as "an ideal design for understanding and interpreting observations of educational phenomena" (p.2). According to Guba and Lincoln (1981), the purpose of the case study is to "reveal the properties of the class to which the instance being studied belongs" (p. 371). Two purposes are suggested by Becker (1968): 1) to understand the groups being studied; and 2) to develop theory related to social structure and process. These purposes all support the use of qualitative case study for this research project. An understanding of case study research and its methodology are essential to the appropriate application in the research setting.

Description of qualitative case study

Case study research is one form of descriptive, non-experimental design which is inductive by nature and results in words and pictures rather than numbers (Merriam, 1988). Bogdan and Biklen (1982) define case study as the observation of a specific situation, program, strategy, or group which involves the detailed examination of one setting, single subject, depository of documents, or particular event. Yin (1984) contends that case study is an empirical inquiry which uses multiple sources of data to investigate a contemporary phenomenon within its real-life context when the boundaries between phenomenon and context are not clear. While Yin remains closest to the quantitative or positivist research paradigm in his definition and Merriam has moved solidly into the qualitative or naturalist research paradigm, these definitions seem to agree that case study in educational research is an examination of educational phenomena within one setting which uses multiple sources of data to provide a rich description of the "case" being studied.

In her discussion of case study research in education, Merriam (1988) includes a review of sources which offer characteristics and terminology related to qualitative case study. Her review yields four characteristics which she labels "essential properties of a qualitative case study" (p. 11). Case study research is *particularistic*, meaning that is focuses on a particular or specific situation, event, program, or phenomenon. It is *descriptive*, providing a "thick" description of the phenomenon under study; *heuristic*, providing insight and illumination of the relationships of variables within the phenomenon; and *inductive*, allowing the generalizations, concepts, and hypotheses to emerge from the data which is grounded in the context of the phenomenon.

Implicit in the definitions, descriptions, and characteristics of case study research presented by various authors are conditions under which case study is the appropriate research design. Case study is suggested as the preferred research design for the study of contemporary events within which behavior of the participants cannot be manipulated and the boundaries of the interacting phenomena cannot be delineated (Merriam, 1988; Yin, 1984). "How" and "why" questions are most appropriately examined with qualitative design, including case study (Marshall & Rossman, 1989; Merriam).

The desired end product of the research study also influences the selection of the research design; a "holistic, intensive description and interpretation of contemporary phenomena" suggests qualitative case study (Merriam, 1989, p. 9). Because case study is an examination of a specific situation, program, or event (Bogdan, 1982), a deciding factor in the decision to use case study design is whether a "bounded system" can be identified for the study (Smith, 1978). The bounded system is the case to be studied and is selected based on its characteristics, such as being a representative example of the issue or phenomenon being studied (the middle level school), or on its intrinsic interest, such as a particular program of interest (a program for high school dropouts).

The focus of qualitative case study research is influenced by the discipline within which the case study is grounded. *Ethnographic* case study is grounded in anthropology and involves an "intensive, holistic description and analysis of a social unit or phenomenon" (Merriam, 1989, p. 23). Ethnographic case study is primarily concerned with culture as it attempts to describe the shared values and beliefs, stories, practices, and behaviors of the group being studied (Goetz & LeCompte, 1984). *Historical* case studies in education are descriptions of programs, institutions, and/or practices in terms of evolution over time as well as the context, the assumptions behind the phenomenon, and the impact on the participants. *Psychological* case study focuses on the individual and uses theories and techniques from psychology to examine human behavior. In education, psychological case studies have been used to study learning, the most well known being Piaget's study of his own children to develop his theory of cognitive developmental stages (Merriam). *Sociological* case studies in education differ from ethnographic or psychological through a focus on society and socialization rather than culture or the individual.

Sociological case studies contribute to the development of "grounded theory" which is theory that is developed from descriptive data 'grounded' in real-life situations (Glaser & Strauss, 1987). In his discussion of sociological understanding, Douglas (1970) concludes that "any scientific understanding of human action...must begin with and be built upon an understanding of the everyday life of the members performing those actions" (p. 11). Educational case study is an attempt to understand the actions (behaviors) of humans within the school context and specifically actions and beliefs related to teaching and learning and to build grounded theory related to educational phenomena.

Qualitative case study can be described, not only in terms of its characteristics or its disciplinary foundations, but also in terms of the nature of the final report (Merriam, 1989). *Descriptive* case study in education provides basic information and rich description of the phenomena being studied without any attempt to develop or support theoretical constructs.

Interpretive or analytical case studies use rich description to "illustrate, support, or challenge theoretical assumptions" (Merriam, p. 28). Using an inductive analysis model, theory is abstracted and conceptualized from the data. Analytical case studies are characterized by complexity, depth, and theoretical orientation (Shaw, 1978). *Evaluative* case study is similar to the analytical case study but uses rich description and explanation to make judgments regarding the phenomenon being studied (Goetz & LeCompte, 1984; Merriam; Patton, 1980; Stake, 1983).

Once defined and understood, case study research design does not dictate any particular set of methods for data collection or analysis; although interview, observation, and examination of documents (artifacts) are the common techniques (Merriam, 1989). The purposes of the case study, however, do provide some insight into the role of the researcher in the case study design. Qualitative researchers are more concerned with process, the how and why questions, than with a product or outcome. They tend to be interested in meaning, and meaning is assumed to be embedded in the experiences of the participants in the phenomenon. The qualitative researcher is the primary instrument for data collection and analysis, and all data are filtered and mediated through the researcher (Merriam). Qualitative research, by nature, involves fieldwork in order for the researcher to observe the phenomenon in the natural context.

Strengths and limitations of case study research

The strengths of any research design are inherently related to its purposes and the rationale for selecting that design for the research questions being studied. A primary strength of case study research is the rich and holistic description of the educational phenomenon. When description and understanding of the characteristics of a population are desired, case study is the best method to answer those questions (Merriam, 1989). Case study offers insights and expands the readers' understanding of and experience with the phenomenon. Theory which is grounded in case study provides important knowledge to the field of study.

Because of the nature of education (a complex system where boundaries between phenomena are unclear and study must be completed in the real-life context of the school), case study is a particularly useful methodology.

As with many research methods, the strengths of case study also contribute to its limitations. Fieldwork which results in thick, rich description of a phenomenon has costs, both in terms of time and money (Merriam, 1989). The nature of the final product of a qualitative case study may result in dismissal by the potential reader as either "too lengthy, too detailed, or too involved for busy policy makers and educators" (Merriam, p. 33). Additionally, Guba and Lincoln (1981) warn that a case study may appear to be the whole picture of the phenomenon when it is actually only a piece of the picture. There is also the danger of either oversimplifying or exaggerating a situation, leading to false conclusions by the reader (Guba & Lincoln). Sensitivity and integrity on the part of the researcher are essential to the case study and are a limitation if the researcher is unaware or insentient to this issue.

The issues of reliability, validity, and generalizability are considered by some to be limitations of qualitative research in general and qualitative case study research specifically. Merriam (1989) suggests that these concepts are as vital to qualitative research as to quantitative research, as it is the validity and reliability which allow the reader to trust the results of the research. However, the application of these concepts in qualitative research requires a shift in paradigm to one which is congruent with qualitative methodology.

Internal validity is defined as the extent to which the findings match reality. Qualitative research assumes that reality is "holistic, multidimensional, and ever-changing" (Merriam, 1989, p. 167). What is "real" is determined and defined by the participants in the event or phenomenon, therefore, what seems to be true is more important than what is true (Walker, 1980, cited in Merriam). "Qualitative findings are validated to the extent that collectivity members recognize and endorse the sociologist's account of their social world" (Bloor, 1983, p. 156). The qualitative researcher ensures internal validity by showing that the findings of the

research accurately represent the perceptions of the participants being studied. Research tools used to ensure internal validity include triangulation through multiple sources of data sources, multiple investigators, or multiple methods to confirm findings; member checks of the data and the findings; long-term observation or repeated observations; peer examination of the data and findings; participatory research which includes the participants in the study in the design and implementation of the research study; and clarification of the researcher's biases through identification of assumptions and theoretical orientation at the beginning of the research process (Merriam).

Reliability is consistently a problem in educational research, whether quantitative or qualitative, due to the unstable nature of the behavior of students and teachers in schools and the highly contextual nature of social investigations (Merriam. 1989). The shift in paradigms related to reliability in qualitative research requires an acceptance that replication of a qualitative study will rarely produce identical results. A more appropriate application of reliability in qualitative case study research is that, given the data collected in the study, another researcher would concur with the findings and, thus, that the results are consistent and dependable. The case study researcher establishes the reliability of the study through explanation of the assumptions and theory behind the study, triangulation, and creating an "audit trail" which presents the methods in such detail that it can be used as a guide or manual by which another researcher could replicate the study (Goetz & LeCompte, 1984).

External validity is the extent to which the results of the study can be applied to other situations. It is particularly important to apply the concept of generalizability in a different manner in qualitative case study research than is traditionally done in quantitative research. "Generalizing from a single case selected in a purposeful manner rather than random manner makes no sense at all" (Merriam, 1989, p. 173). In case study research, the appropriate application of generalizability involves the reader or user of the study. The researcher's task is to provide a rich, thick description of the phenomenon being studied, make comparisons to

other situations in the category of the case study, and conduct cross-case analysis as appropriate. The user of the research is left with the task of understanding and determining the application of the research to the user's setting.

Case study data collection techniques

Qualitative case study research does not dictate any particular data collection techniques and does not eliminate any data source or technique from the triangulation process which supports and establishes the validity and reliability of the case study. Case study research may involve only those data collection techniques which are in the qualitative research paradigm or may mix the methodology through incorporation of quantitative techniques, such as surveys, into the total data picture.

In the mixed methodology study, the quantitative data provides answers to "how many, how much, and how it is distributed" (Merriam, 1989, p. 68). While there is some description inherent even in quantitative data as it quantifies an identified quality, the case studies rely heavily on qualitative data for the rich, thick description which forms the basis for the interpretation and development of the grounded theory as well as the basis for the external validity, or generalizability, of the case study. The qualitative data collection techniques used frequently in case study research include interviews, observations, and analysis of documents.

Interviewing

In-depth interviewing, described as a conversation with a purpose, is frequently used by qualitative researchers as a primary data collection technique (Marshall & Rossman, 1989; Merriam, 1989). The interview helps the researcher learn about behaviors and events which cannot be observed as well as about the feelings and interpretations of the participants in a situation or phenomenon. An interview involves interaction between the interviewer and the respondent for the purpose of gaining information that is valid and reliable (Marshall & Rossman).

The structure or approach to the qualitative interview can be described as a continuum from informal, unstructured conversation to highly-structured fixed-response (Patton, 1990). The closed, fixed field response interview structures the questions which are asked of all respondents, and the responses are limited and fixed, as in the oral questionnaire. Less structured is the standardized open-ended interview in which each respondent is asked the same questions which are designed to elicit open-ended responses. A general interview guide approach provides the interviewer with topics to be explored with each respondent and sample questions within the topics, but the interviewer is allowed and encouraged to probe and divert from the schedule to follow the direction of the respondent. For the qualitative case study, this general interview guide approach to interviewing provides focus to the interview while allowing the respondent to tell his or her perceptions of the phenomena being studied.

Questioning

Ely (1991) supports the general interview guide approach while suggesting that the interviewer needs to be prepared with good open-ended questions and willing to "swing with events and to put them to good use" (p. 63). She emphasizes the importance of planning the questions prior to the interview in order to ensure that the questions are good questions designed to get the information desired and needed. "Open-ended questions can unearth valuable information that tight questions do not allow" (Ely, p. 66). Patton (1990) agrees that open-ended questions allow the respondents the freedom to take their own direction in telling their stories.

Questions to be used in an interview can be categorized according to the type of information sought, as well as to the type of response stimulated (Merriam, 1989; Patton, 1990). *Experience/behavior* questions ask the respondent to describe an event, experience, or behavior which would have been observed had the researcher been present at the event. *Opinion/value* questions attempt to get at what the respondent's perceptions and thinking are about the phenomena being studied. *Feeling* questions ask about the emotional response to the

phenomena. *Knowledge* questions attempt to ascertain the facts regarding the research topic. *Sensory* questions allow the interviewer to learn what the respondent experiences through the senses as related to the research topic. *Background/demographic* questions identify the respondent within the population being studied and provide insight into the context of the respondent.

While all of the above types of questions might be used in any one interview, the wording of any type of question influences the response received. Patton (1990) suggests that the researcher "use presuppositions to increase the richness and depth of responses and data obtained" (p. 303). Presuppositions offer two advantages to the researcher and respondent. First, they presuppose that the respondent has a response, thereby eliciting more information similar to the way open-ended questions yield more information than fixed response questions. Second, the presupposition question implies a naturalness which eliminates the need for the respondent to decide if the condition does or does not exist. Patton advises against the use of the word "why" as it infers causal relationships and may imply a judgment of the respondent's behavior. He also cautions that the researcher must avoid leading questions which give hints to the respondent as to the correct or desired response. The type and wording of the questions play a significant role in the flow of the interview and the interaction between the interviewer and respondent.

Interviewer and respondent interaction

The interviewer is responsible for the flow of the interview and must also be aware of the respondent's reaction to the questions in order to ensure that the interview elicits the best possible information. The relationship between the interviewer and the respondent has a significant impact on the interview process. Merriam (1989) asserts that the interviewer who is nonjudgmental, sensitive, and respectful of the respondent ensures the success of the interview. Ely (1991) discusses the detachment of the interviewer and suggests that a

sympathetic interviewer who shares "judiciously" in the experience of the respondent, increases the trust level and provides the basis for "richer interviews" (p.61).

The pace of the interview is another way that the interviewer facilitates the flow. Open-ended questions during an interview must be followed by silent wait time during which the interviewer listens to and observes the respondent, allowing time to think and reflect as well as to respond (Deutscher, 1984; Ely, 1989; Merriam, 1989). Probing involves asking for more information based on the response to a question. Additionally, reflecting back what was heard and asking for clarification supplement the open-ended question to ensure that the interviewer has a complete understanding of what the respondent is describing in terms of both fact and feeling. Just as Patton (1990) stresses the importance of using the language of the respondent in the questions, Deutscher alleges that the interviewer must listen within the "language" of the respondent as the words are simply symbols of the meaning that the respondent puts on those words. To fully understand the information being given in the interview, the researcher must understand the meaning and context of the participant.

Recording interview data

Merriam (1989) offers three techniques to capture the data from an interview and suggests that tape-recording is most common and more preferred. Recording assures that all data is preserved for analysis while also providing the researcher with an opportunity to examine and improve questioning technique. Tape-recording eliminates the possibility of any altering of the respondent's words, and Patton (1990) stresses the importance of direct quotations from the respondents. The tape-recorder frees the interviewer from the task of taking verbatim notes and enables the interviewer to focus more directly on the flow of the interview (Patton).

The taking of verbatim notes during the interview is the second data capture technique suggested by Merriam (1989). Rarely is it possible to capture every word during an interview, and it is impossible for the interviewer to know at the outset what information will be valuable

and what might not be salient; therefore, this method is discouraged unless tape-recording is impossible. (Merriam; Patton, 1990). Taking notes during the interview is encouraged, however, even if the interview is being tape-recorded. These interview notes allow the interviewer to return to a point the respondent made to clarify or expand during the interview, facilitate the analysis of the data later, and help pace the interview (Merriam; Patton).

The least desirable technique to capture interview data is to make notes on the interview after it has been completed (Merriam, 1989). While there may be research circumstances when this is the only possible data capture method, such as covert fieldwork or interviews which might be intrusive to the respondent; whenever possible, the data should be collected as the interview is being conducted (Merriam; Patton, 1990). Interviewers should make notes of their perceptions and reflections immediately following an interview, but these should be in addition to the actual interview data.

Tape-recorded interviews may be transcribed in their entirety or may be coded and noted through the counter on the recorder when transcribing total tapes is not feasible. The transcriptionist must take care to transcribe exactly what is on the tape without editing for syntax or grammar. When transcribing the tapes is not possible, the researcher can listen to the tapes, take notes from the interview, and code those notes with the counter on the recorder. Direct quotes can thus be located to be included in the final report.

The words of the respondent are the raw data of the interview. These words must be captured accurately and used appropriately in the report of the research findings. The role of the researcher is to provide an environment in which the interview can achieve maximum success for the research purposes. The researcher is also responsible for the flow of the interview and for the comfort of the respondent. A carefully planned interview; using open-ended questions followed by reflection time, clarifications, and probes; conducted by an interviewer who is sensitive to the needs of the respondent; has the potential to yield the rich, thick description which characterizes qualitative case study research.

Focused group interview

Interviewing for qualitative research purposes is focused within the parameters of the research questions being studied while utilizing open-ended questioning techniques to elicit depth in responses. This is true for individual interviews as well as for group interviews. The focus group interview, however, presents the researcher with a different set of interview dynamics as the participants interact with and react to one another. Group interviews may be preferred when the researcher "seeks clues to diverse definitions...by a numerous body of individuals" (Merton, Fiske, & Kendall, 1990, p. 135). Research in the social sciences (education) may be particularly suited to group interview techniques. The experience of the individuals within a school takes place in a social context, thus it follows that discussion of experiences may best be facilitated within a setting which allows people to "consider their own views in the context of the views of others" (Patton, 1990, p. 335).

As with all research strategies and techniques, the match between the research question and the technique is the critical issue in planning and implementing a research design. When the decision has been made to use focused interview as a data collection strategy, the choice between group or individual interviews, or a combination of both, should be based on the salient advantages and disadvantages of each within the context of the research questions and the parameters of the research design. This review provides a foundation for the decision to use focus group interviews instead of, or in conjunction, with individual interviews based upon the description of the focused group interview, considerations in planning for and facilitating group interviews, and the advantages and limitations of group interviews.

Description of the focus group interview

Within the context of qualitative research, an interview is neither a non-structured conversation nor a predetermined questionnaire with closed-ended response choices (Krueger, 1988). It is, rather, a nondirective interview using open-ended questions which allow "individuals to respond without setting boundaries or providing clues for potential response

categories" (p. 19). The research questions guide and limit the focus of the interview questions. While maintaining an openness to the relevance of all experiences related by participants, it is the role of the interviewer to maintain the focus on the situation under review (Merton, Fiske, & Kendall, 1990). As such, when a researcher conducts a group interview for the purpose of collecting data, it is a focused interview.

Various authors describe the group interview in different ways, while the essential purpose of the interview remains to collect data. Krueger (1988) defines the focus group as "a carefully planned discussion designed to obtain perceptions of a defined area of interest in a permissive, nonthreatening environment" (p. 18). Patton (1990) describes the focus group interview as "an interview with a small group of people on a specific topic" (p. 335). For Ely (1991), an interview is a purposeful conversation between two or more people that is directed by one person in order to "learn to see the world from the eyes of the person[s] being interviewed" (p. 58). Merton, Fiske, and Kendall's (1990) "focused" interview is "focused on the subjective experiences of persons" who have been involved in a particular situation in order to "ascertain their definitions of the situation" (p. 3). Whether the research topic or question of a qualitative study are labeled as 'a defined area of interest', a 'specific topic', or 'the world' of the persons being interviewed, the focus of the interview remains the topic of the research.

Patton (1990) and Krueger (1988) make a deliberate distinction between types of group processes and group interviews. Each notes that the interview is designed to gather information from the group of people involved and is not designed as a problem-solving or decision-making process. There is no need on the part of the facilitator to have the group arrive at any form of consensus, in fact, the desired variety and diversity of responses would preclude any attempt to promote agreement among group members. Additionally, the group interview is not a discussion group to be directed by the participants but is to be guided and directed by the facilitator in order to get information related to the research topic (Ely, 1991).

Planning for and facilitating focused group interviews

Because of the unique purposes related to the research process, groups convened for focus interviews have special characteristics and require thoughtful and informed planning. The researcher needs to determine the size and composition of the group, spatial/logistical details, facilitation strategies, and data capture techniques. These considerations are discussed prior to an examination of the advantages and limitations of the group interview because decisions made in the planning process contribute to the decision as to the appropriateness or inappropriateness of group interview in a specific research situation.

The size of the group interview should be small enough that all participants may participate adequately and yet large enough to provide greater coverage of the topic than an individual interview could yield (Krueger, 1988; Merton, Fiske, & Kendall, 1990). The recommended size of focused group interviews ranges between six and twelve people (Krueger; Merton, Fiske, & Kendall; Patton, 1990). Considerations when determining the exact size of the group include the homogeneity of the group and the purposes of the researcher. When a wide range of responses is desired, a larger group is appropriate; when depth of response is the objective, a smaller group is more effective.

There is agreement among authors that the people in a group interview should share certain predetermined characteristics and, thus, be homogeneous. Merton, Fiske, and Kendall (1990) contend that groups which are socially and intellectually homogeneous provide more productive reports. They advise that groups should be matched on education, occupation, and age with educational homogeneity of primary importance. Their experience with group interviews would indicate that less-educated participants in a group interview tend to defer to those with higher education levels resulting in a stifling of the interaction among group members and an imbalance in the interview data.

Krueger (1988) reports the same experience with educational homogeneity and suggests that the researcher must consider the issue of homogeneity from the context of the

participants. In the school, although a researcher might view teachers and administrators equally as school staff, the teachers may view the administrator as a supervisor and evaluator and, as such, of a different status. With student groups, grade level might be an obvious characteristic to define homogeneity; however, within the grade level, consideration may need to be given to cliques or interest areas of the students. Any characteristic which the participants use to define group status may serve to dissipate the advantage of the group interview through diminished group interaction and participation of all members.

In addition to the composition and size of the group, the spatial arrangement of the group during the interview can influence the spontaneity and character of the responses (Merton, Fiske, & Kendall, 1990). The ideal spatial arrangement is a circular pattern in which the interviewer is equal with the group members. A semi-circle may be used when necessary, but rows of participants facing the interviewer should be avoided at all costs as this arrangement implies a schoolroom with "correct" and "incorrect" answers (Merton, Fiske, & Kendall). In addition, this arrangement elevates the role of the interviewer and diminishes the interaction among the participants, one of the major purposes of the group interview.

While the role of the interviewer is to ask the questions which focus the group on the topic of the study, the interviewer functions more as a facilitator of the interaction among group members than as a directive interviewer. As such, the facilitator of the group not only provides the stimulus for response by asking questions but also ensures that all participants who desire to respond have an opportunity to do so. The ideal interview situation would include two interviewer/facilitators who would sit opposite each other in the circle and assist one another in ensuring that all participants have an equal opportunity to respond while one asks the questions and the other captures the data (Patton, 1990).

Data capture techniques are another consideration in the planning of the focused group interview. Group interviews can be tape-recorded, however, the identity of the participants is difficult as having each speaker identify him/herself prior to speaking interrupts the spontaneity

of the group process (Merton, Fiske, & Kendall, 1990). The second interviewer or another observer can record the sequence in which participants respond which can then be transposed into the transcript of the tapes to identify speakers if desired. Another possible data capture technique is to have the second interviewer or a stenographer script the flow of the interview.

A third possible data capture technique, not discussed by the authors reviewed, but being used by Edgar Schein in group interviews to examine the culture of organizations, is for the interviewer to capture the data on a flip chart in full view of the participants as they respond to the interview questions (Sweeney, 1993). With this technique, the participants are able to correct any inaccuracies in the recording of the data as well as to have their responses validated in print. A caution with this technique is for the interviewer to avoid editing the responses as it is the words of the participants which are validating, not the translation of the interviewer.

Advantages of focus group interviews

The primary purpose of the focused group interview is also the major advantage to the group interview–the collection of data within the social context. The participants in the group interview interact with and are influenced by one another. As a result of this interaction, the interview more closely resembles a natural, real-life situation and allows the dynamic nature of the interaction to be captured as a part of the data (Krueger, 1988). As members of the group share their experience and receive approval and support from the interviewer, others will be encouraged to share their own stories. The resulting release of inhibitions provides a safe climate in which the data is meaningful and rich (Merton, Fiske, & Kendall, 1990).

The safe climate created by the interviewer and enhanced through social interaction also serves to widen the range of response (Merton, Fiske, & Kendall, 1990). As the interviewer probes the unanticipated issues, a broader scope of responses provides a more adequate coverage of the topics (Krueger, 1988; Merton, Fiske, & Kendall). In addition, details that an individual respondent might have forgotten are triggered by the responses of other respondents. This is particularly helpful both when the focus group interview is being used to

guide the development of a questionnaire or survey or to supplement the data from a survey. In the first case a better survey/questionnaire can be developed based on the responses of the focus group; in the second case the data from the focus group validates, deepens, and triangulates the survey data.

A third advantage of focused group interviews is high face validity (Krueger, 1988). The process of being in a group is common to most readers of research, therefore, the technique is easily understood. Additionally, the results of the interview are reported in narrative form with illustrative quotations from the participants which makes the research more friendly than statistical terminology to lay readers.

Sample size can be increased substantially for a qualitative study through the use of focus group interviews as an interview with ten participants taking the same researcher time as an individual interview (Patton, 1990). The increase in sample size allows the researcher to gather a large amount of data which can then be narrowed and deepened through a smaller number of individual interviews than might be necessary without the initial data from the focus group interviews.

The final advantage of group interviews is the cost effectiveness in terms of actual financial cost and time expenditure. Group interviews can be conducted relatively quickly in emergency situations with skilled interviewers able to facilitate a number of groups, analyze the results, and prepare a report in less than a week (Krueger, 1988). The increase in sample size and decrease in time expenditure both contribute to less financial expenditure than with individual interviews or, perhaps, even with questionnaire research.

Limitations of focused group interviews

As with all research techniques, group interviews have limitations. Often, the same characteristics which serve to make group interviews an advantage over individual interviews also serve as limitations. The social interaction of the participants, which is a desired aspect of the group interview, results in less control for the interviewer over the direction of the

interview. At times this results in detours in the direction of the interview and discussion of irrelevant issues. The interviewer must then attempt to redirect the group's focus to the pertinent situation without demeaning or diminishing the responses of the participants.

Another hazard of the group's digression into unrelated topics is a loss of continuity in the interview. Through the introduction of multiple topics the focus of the interview can be lost in the confusion and complexity of the irrelevant discussion. This also may result in the train of thought of the respondents being interrupted by those who intercede and interject their thoughts onto the less articulate. Members of the group who feel threatened or humiliated by other members or by the interviewer will also be inhibited from full participation (Merton, Fiske, & Kendall, 1990).

Merton, Fiske, and Kendall (1990) describe the *leader effect*, another result of the social orientation of the group interview. More articulate members of the group may influence the responses of the group through expression of emphatic opinions which seem irrefutable to less articulate members. One or two more assertive members may monopolize the discussion. As in the situation where the group defers to the more highly educated member, the more articulate person may provide such detailed responses that others respond within this structure rather than supplementing the data with their own remembrances.

All the above limitations point to the critical role of the interviewer as a facilitator of the discussion. The need for experienced and trained interviewers can be a limitation of focus group interviews (Krueger, 1988; Patton, 1990). Interviewers must be highly skilled at using open-ended questions, probes and wait-time, and knowing when to move to a new topic or question. This skill level makes the group interview a difficult task for the beginning researcher without group process experience.

Krueger (1988) also suggests that the variation in groups due to group dynamics and all the issues discussed as both advantages and limitations of focus group interviews require that a sufficient number of groups be included in the sample to "balance the idiosyncrasies of

individual sessions" (p. 46). In educational research this might be accomplished by determining a percentage of the population to be sampled and then creating a variety of groups from that sample, keeping in mind the parameters for composition of the groups.

There are logistical limitations to the focus group interview as well. Obviously, it is necessary to assemble a group in one place to have the group interview. This may require people to travel to and assemble at a certain time and place; or, in a school, it may require providing release time for the group from classroom activities which may create a disruption to the educational process. A second logistical consideration is the location of the interview which must provide an environment which facilitates and stimulates conversation. The logistical considerations discussed earlier, such as a circle configuration, require a large enough space to seat the group comfortably while the individual interview can be conducted in a relatively small room such as an office.

Beyond the actual interview situation and its limitations is the difficulty in analysis of data from focus group interviews. Again, because of the social nature of the interview situation, extreme caution must be taken to avoid lifting bits of data out of context or drawing conclusions prematurely. Frequently the interplay among participants makes one person's comments relevant only when connected to the previous respondent's remarks. Additionally, responses may be rescinded or contradicted later in the discourse as a result of stimulation and further thinking by participants. The data must be analyzed within these caveats.

Qualitative researchers should consider both the advantages and limitations when selecting any research technique, and particularly when contemplating using group interview techniques. Cost effectiveness in terms of time, finances, and increased sample size make the focus group interview a logical and useful methodology when a large sample is desired for interviewing but the resources, both time and money, are limited. It is appropriate to use the focus group interview when the phenomena being studied involves a social context and the data is enhanced by a social context for data collection. The social interaction of the group provides

a climate that parallels natural, real-life conversation and releases the inhibitions of participants and widens the range of responses.

Limitations of the group interview also reflect the social context of the interview situation. The interviewer has less control of the social process which may result in the interview being sidetracked. The social interaction among the group members may result in an imbalance of participation due to monopolization by some members or deference by others. Differences between interview groups can result in disparities in data, and, therefore, group interviews should be triangulated by sufficient groups as well as other data collection techniques. The logistical requirements of the group interview require special consideration to ensure an environment conducive to conversation by all participants. When the interviewer is not able to create an interview situation which minimizes these limitations, the focus group interview is not an appropriate research technique.

The importance of interviewer skills to the successful use of group interview as a research technique cannot be overemphasized. The interviewer must be highly proficient in the use of open-ended questioning, probing and wait-time, and knowing when to introduce a new question or topic. First and foremost, the interviewer should be experienced with group dynamics and be an expert facilitator of group process. Without an interviewer with this expertise, the focus group interview may not be successful as a research method.

When the research question(s) dictate an interview which will yield deep understanding of the experiences of individuals related to the phenomena being studied, individual interviews are more appropriate. The individual interview setting allows the interviewer to probe more deeply into individual responses and to deviate more from the original interview schedule. Additionally, when the social context of the phenomena being studied is not relevant and time is not a factor, individual interviews are easier to arrange and to facilitate than group interviews due to the limitations of group interviews discussed previously.

As with all research techniques, the appropriateness of the focus group interview is a function of the research question, the parameters of the research situation, and the skill of the researcher. The focus group interview has been defined as the structured and purposeful questioning of a group of people with similar characteristics for the purpose of gathering information on a specific topic. For the qualitative researcher whose purpose for the interview is enhanced by the gathering of high quality data in a social context, the advantages of the focus group interview outweigh the limitations. When selected for the appropriate reasons, planned with careful consideration, and conducted by an expert facilitator, focus group interviews can provide rich and deep qualitative data from a large sample of participants in a relatively cost efficient manner.

Qualitative Data Analysis

In qualitative research it is difficult to separate data collection from data analysis, as the analysis is ongoing in the processes of interviewing and observing (Marshall & Rossman, 1989; Merriam, 1989; Patton, 1990). As the interviewer probes and uses the responses to questions to guide the direction of the interview, analysis is taking place. As one interview or one observation causes the researcher to ask for or look for new information in the next interview or observation, analysis is taking place. Yet, when the interviewing and observing have been completed, and the researcher begins examining the total picture of the data; the data analysis phase has officially begun.

Pfaffenberger (1988) lists three steps in the analysis process: "rewriting, coding, and comparison" (p. 26). Rewriting involves filling in more detail to the original field notes and usually takes place immediately after the data collection activity, such as at the end of a day of observing or interviewing. Other authors include the writing of field notes in the data collection process and begin data analysis with organization of data into single units of information, followed by coding, and comparison (Erlandson, 1993; Lincoln, 1985; Merriam, 1989; Patton, 1990). Organization of the data into single units involves breaking the data into

"the smallest pieces of information that may stand alone as independent thoughts" (Erlandson, p. 117). This is done either through copying the units onto notecards, cutting the original copies of the data into pieces, or separating the data within a computer file. Whether rewriting or breaking the data into single-idea units, this first step in data analysis involves preparing the data for further analysis through coding.

Coding of the data is actually a process of sorting the individual units into categories. There is agreement among authors that this is the next step in the data analysis process, although the approaches taken to this categorizing vary along a continuum from induction to deduction; from generation to verification; from construction to enumeration; and from subjective to objective (Goetz & LeCompte, 1981). Categorizing the data units according to predetermined categories which were established through the theoretical constructs of the study by placing each unit into one or more categories falls at the deductive-verification-enumeration-objective end of the continuum. At the inductive-generation-construction-subjective end of the continuum is the technique of allowing patterns and categories to emerge from the data independent of the theoretical basis for the study. Most data analysis approaches for educational case study fall between these extremes yet lean toward the inductive-generation-construction-subjective.

Regardless of the approach, the process of categorizing and coding the data involves looking at each data unit and determining where to put it, or how to code it. This process is described in steps (Erlandson, 1993; Lincoln, 1985; Merriam, 1989): First, read the first unit of data, note its characteristics, and create the first category. Second, read the second data unit, note its characteristics, if similar to the first unit add it to that category; if not, create a second category. Continue this process until all data units have been assigned to a category. At this point, when all data are sorted into categories, the categories are examined and labeled; and the characteristics of membership in each category are defined. The next step in this process is to repeat the previous inductive process within each category to further define the data. While

Patton (1990) does not describe the process in steps, he affirms the inductive process suggesting that "the patterns, themes, and categories of analysis come from the data; they emerge out of the data rather than being imposed on them prior to data collection and analysis" (p. 390).

At the deductive-verification-enumeration-objective end of the continuum, the analysis process is similar to inductive analysis with the exception that the data is sorted into predetermined categories (Lincoln, 1985). Data analysis and coding of any piece of data can begin immediately after the data collection has taken place as the process, which Lincoln labels typological analysis, involves coding the single units of data according to the categories established by the a priori theoretical framework. Enumerative systems, where frequency counts of data within categories are developed, and standardized observational protocols, in which observed behaviors are recorded within predetermined categories, are other examples of analysis approaches in this model (Lincoln).

Regardless of the approach to categorizing the data, the researcher must examine the categories to ensure that they are salient, credible, unique, and feasible within the parameters of the research study (Patton, 1990). This process involves a testing of the emergent hypotheses through searching the data for other explanations and searching for negative instances of the patterns (Marshall & Rossman, 1989). Negative case analysis involves a search for disconfirming evidence among the data (Ely, 1991: Erlandson, 1993). When negative cases are found in the data, the researcher has the opportunity to seek further understanding of the case through the original source of the data which might result in a "dissenting opinion" to the rest of the data or an alternative interpretation of the phenomenon (Erlandson). Ely makes a distinction between a negative case, which refutes the theoretical construct, and a discrepant case, which refines the theoretical construct. In either case, the search for negative or alternative explanations enhances the opportunity for rich, thick description which, in turn, increases the validity of the qualitative case study.

The categorization leads to interpretation, and dealing with disconfirming cases and data irregularities is part of this interpretation process (Patton, 1990). Going beyond the description of the data, interpretation involves "attaching significance to what was found, offering explanations, drawing conclusions, extrapolating lessons, making inferences, building linkages, attaching meaning, [and] imposing order" (Patton, p. 423). It is the researcher's role to make the interpretation of the findings and responsibility to make a clear distinction between interpretation and description in the final report of the research.

The Final Report

Writing the final report is the last step in the data analysis process–and in the research process. The task in the report is "to create a text in which the person or persons you have learned about come to life" (Ely, 1991, p. 167). "Research is of little consequence if no one knows about it" (Merriam, 1989, p. 185), and as such, it is the responsibility of the researcher to complete the research process by reporting and disseminating the results of the study.

In case study research, the organization of the case study data into a case record is the first step and is accomplished through the analysis process (Merriam, 1989). The next step is to determine the audience of the report which helps define the relative emphasis of parts of the report in addition to the technical level of the report (Merriam; Patton, 1990). It is crucial that the report focus on those ideas which are salient to the audience and omit those which are not (Patton). Merriam suggests that focus may involve a thesis, a proposition to be argued and defended; a theme, the theoretical foundation; and/or a topic, a description of a specific aspect of the study. While the thesis or theme may be of primary interest to academics, the topic focus may be of more interest to the practitioner (Merriam).

Once the researcher has determined a focus for the report, the actual writing of the report can begin. Different authors use different methods to organize and write, and Ely (1991) stresses the importance of the qualitative researcher's cultivating a personal style and finding a voice for writing. The writing of the report, whether a case report for the participants

in the study or an academic paper for sharing the findings with the professional field, becomes the creation of a narrative (Ely). The report includes not only the description of the case but also the interpretation of the phenomena studied. The task of the writer is to present the context of the study as fully and richly as possible. Five criteria against which the quality of a case study can be judged are provided:

- The case study must be significant.
- The case study must be complete.
- The case study must consider alternative perspectives.
- The case study must display sufficient evidence.
- The case study must be composed in an engaging manner.

(Yin, 1984, p. 140-145).

If these five criteria are met, not only will the case study research inform the practice of education, but it will do so in a user friendly way that will invite many educators to increase their readiness for and engagement in the research process.

The application of qualitative research methodology is relatively new to educational research despite what appears to be a logical and appropriate match between this methodology and the socio-behavioral foundations of teaching and learning. This review of salient literature related to qualitative research in education has attempted to identify the appropriate methodology for this study and to define and describe the strategies and techniques within qualitative research which will most efficiently and judiciously answer the defined research questions.

Case study research was defined as the study of educational phenomenon using multiple data sources within a particular situation which represents the natural context of the phenomenon being studied. While no specific data collection methods are required for case study, the most common techniques are the interview, either individual or group, observation, and artifact analysis. Data analysis is ongoing throughout the data collection process but is finalized after all the data are available to the researcher. Data analysis involves unitizing, categorizing, and interpreting the data. The final step in the qualitative case study research

process is the writing of the research report which may include a case study report for the research participants as well as an academic report for sharing the findings of the research with the professional field.

The research questions of this study indicated that case study was an appropriate methodology to employ in the study of this problem. A mixed methodology approach to the case study was indicated due to the need to explore both "how much" readiness and engagement exists within the case sites as well as to provide a rich, thick description of the manifestations of readiness; engagement; the resiliency protective factors; and the structures, policies, and procedures of the student-centered middle level school.

CHAPTER 3. METHODOLOGY

Of primary importance in the design of a research study is the match between the research questions and the methods used to answer those questions. This is true when determining whether to use quantitative or qualitative methodology; it is also true when determining which qualitative methods to use and/or which statistical tests to use to analyze quantitative data. Merriam (1989) asserts that case study research is "an ideal design for understanding and interpreting observations of educational phenomena" (p. 2). Marshall and Rossman (1989) propose the use of qualitative case study for research that is "exploratory or descriptive and that stresses the importance of context, setting, and subjects' frame of reference" and for research that "delves in-depth into complexities and processes" and research on "informal and unstructured linkages and processes" (p. 46). Further, the triangulation of multiple sources of data, using more than one data gathering technique or more than one type of data, such as quantitative and qualitative data, and using multiple cases can greatly strengthen a study's usefulness for other settings (Marshall & Rossman; Merriam).

All the above criteria apply to this research study. The relationship between the theoretical constructs as operationalized in educational strategies is complex and requires a deep examination of the beliefs and practices of the school. A rich description of the context, setting, and participants' frame of reference is essential to a deep understanding of the complexities of the interactions between the factors. In this case, a rich description of the practices and policies of each school in this study provides the information needed to examine the influences between and among the student-centered middle level school concept, teacher readiness and engagement, principal leadership, student engagement and resiliency.

To match the methods with the research questions, this research utilized the case study method employing qualitative and quantitative methods with triangulation. "Triangulation is the act of bringing more than one source of data to bear on a single point (Marshall &

Rossman, 1989, p. 146). Methodological triangulation combines research techniques to enable weaknesses of one technique to be overcome by strengths of others; the result of triangulation is stronger internal validity and reliability of the research study (Merriam, 1988). Not only were both quantitative and qualitative data used to triangulate, but triangulation also occurred within the qualitative methodology using data collected through interview, observation, and artifact analysis for qualitative data sources.

Background

This study was an outgrowth of a previous study which examined the effectiveness of rural Iowa secondary school programs for students at risk (Licklider, 1992). In the original research project, three separate studies were undertaken and integrated into a comprehensive picture of current practices being used to mitigate risk. Study 1 determined the current status of rural Iowa Programs for students at risk including what is being done and the effectiveness of those efforts. Study 2 assessed the readiness of principals and teachers for meeting the needs of students at risk. Study 3 was an initial examination of the at-risk programs of four schools (two middle level schools and two high schools) to determine which components of the programs were most productive, appropriate and cost effective. These four schools were selected based on Studies 1 and 2 and appeared to have a higher level of teacher readiness as well as at-risk programs which appeared to be effective.

Studies 1 and 2 utilized survey/questionnaire methodology which was analyzed through statistical analysis of the survey responses. The result of Study 1 was a profile of student-at-risk programs in rural Iowa secondary schools which defines the identification criteria, estimated number of students at risk, and implementation strategies for the nine components of the Iowa standard for programs for at-risk students (Licklider, 1992). Study 2 resulted in a profile of the readiness of rural Iowa educators to meet the needs of students. The readiness model for this study involves the interaction among "capacity (ability), will (desire or choice to

act), and sense of self-efficacy (perceptions about personal ability, likelihood of actions achieving desired results, and past success)" (Licklider, 1992, p. 4).

From the results of Studies 1 and 2, schools were selected to participate in Study 3. Case studies of the at-risk programs in the four schools were conducted using observation and interviews. The case study reports included a description of the components of the at-risk student programs which appeared to be effective. Jamestown Middle School and Morristown Middle School were participants in all three previous studies. (Note that Jamestown and Morristown are pseudonyms for the two schools in this study.) Through these studies, the two schools in this study emerged as middle level schools which appear to have a higher staff readiness to meet the needs of all students than the typical middle level school in rural Iowa as well as programming for at-risk students which appears to be effective.

Research Strategies

In order to appropriately match the data collection and analysis techniques with the research questions and hypotheses of this study, a case study design was used. Both qualitative and quantitative methods were used to collect the data for the rich description of the context, setting, and student and staff perceptions for each school.

It was important in this study to examine the differences and similarities between the two schools being studied; case studies were used to make these comparisons and to collect the information for examining theoretical concepts. Qualitative interviews, observations, and artifact analysis were the primary means used to provide insight into the differences and similarities between the two schools. Quantitative surveys were also used to examine student engagement, teacher engagement, and teacher readiness in each school and to provide data for triangulation.

Site Selection and Access

Ely (1991) describes the process of "getting into the field" or gaining access to the research site for a qualitative study as being a delicate process which is critical to the successful integration of the researcher into the site. Jamestown and Morristown Middle Schools were selected from the original four secondary schools because they are middle level schools; the other schools in Study 3 were high schools. The initial contact with Jamestown Middle School and Morristown Middle School involved a telephone call to the principal of each school. During this conversation, the reason for selecting these schools was explained, and the purpose and a brief description of the research methods were provided. Each principal expressed immediate interest in being involved in the study. A meeting was arranged with the principal and at-risk coordinator of Jamestown Middle School, and the Morristown principal delegated the coordination of the research on-site to the guidance counselor.

The first meeting at Jamestown took place on November 1, 1993, at the middle school. At this time, the research outline (included in Appendix A) was shared and expectations for the school and the researcher were discussed. Specific questions regarding the research process were answered. It was agreed that a summary of the project (included in the Appendix A) would be shared with the superintendent and school board for their information and informal approval of the middle school's participation. In addition, a meeting with the entire school staff was arranged.

On December 3, 1993, a brief meeting was held as a part of an afternoon inservice for the staff. The research outline and summary of the proposal were shared with the staff, and their involvement in the interviews and observations was discussed as well as the plan for interviewing students. Specific questions and concerns were addressed. The results of this meeting and previous contacts with the principal were agreement that Jamestown Middle School would participate in the study and the establishment of the dates for on-site data collection.

Following the telephone conversation with the principal at Morristown Middle School, another telephone conversation was held with the guidance counselor who was to act as the school contact and coordinator for the study. During this conversation the research was outlined and an offer to send the written summary and outline was accepted. On December 6, 1993, a follow-up telephone call to the guidance counselor resulted in a meeting on January 10, 1994. At this meeting the research outline (included in the Appendix A) was shared, and the expectations for the school and the researcher were discussed with the two guidance counselors who coordinated the project on-site. Specific questions regarding the research process were answered, including sample size and sampling techniques. Plans were made to share the study with the staff and to gain informed consent from parents for student participation. Dates for data collection/site visits were established with the principal.

With the establishment of the data collection/site visit schedule, access to the sites was accomplished and the next step was implementation of the research plan.

Procedures

In order to ensure that the data from each school site were comparable, a careful attempt to implement parallel procedures was made. The original research plan was for five days on-site in each school with the principal researcher on-site for all five days, a second interviewer on-site for four days, and an observer on-site for two days. The principal researcher was to conduct focus group interviews with students and individual interviews with students as well as to spend one full day observing a "typical student schedule" in each building. The second interviewer was to conduct individual interviews with teachers in each building. The observer was to spend two full days observing, one day each with a "typical student schedule" for two different grade levels such that between the observer and the principal researcher all three grade levels would be observed. These days were to be spaced out with two days for the first site visit, two days for the second which was to be approximately one month after the first, and one day for the last which was to be one month later and was intended to be a day for following-up

any new questions from the analysis of data from the earlier visits and for member checks (checking the interpretations with the participants in the study) of the findings from the previous visits.

Due to a variety of factors, such as differences in on-site personnel helping in the arrangements for the site visits, inclement weather causing school cancellations, and complications in the transcription of the interview tapes, there were differences in the procedures in the two schools. The research procedures used in each school are described in the individual school portions of this "procedures" section. More detail regarding the research techniques used within the research process is given in the discussion of data collection and data analysis later in this chapter..

Use of human subjects

The Iowa State University Committee on the Use of Human Subjects in Research reviewed this project to determine if the rights and welfare of the human subjects were adequately protected, whether risks were outweighed by the potential benefits and expected value of the knowledge sought, that confidentiality of data was assured, and that informed consent was obtained by appropriate procedures. Documentation of the Human Subjects Research review, including the Statement of Informed Consent and the Parent/Guardian Informed Consent Letter, are found in Appendix B.

Jamestown Middle School

The principal of Jamestown Middle School acted as the on-site coordinator and liaison with the researcher, and the research process proceeded essentially according to the original plan. The first site visit was scheduled for February 2 and 3, 1994. Prior to the visit, telephone conversations and correspondence between the principal and the researcher summarized the guidelines for the selection of students to be included in the focus group interviews. Parent Informed Consent was obtained, and few students were excluded from the study. Students were randomly selected to participate in the interviews (105 out of the

enrollment of 296; 35%) and were placed in groups of 7-10 by grade level and according to their schedule for exploratory classes. A schedule for the interviews was developed which allowed all groups to be interviewed in three days (two during the first visit and one during the second visit.)

The teachers were scheduled for interviews during their planning time, and all teachers were scheduled except those whose assignment to the building was for a minimal amount of time per day. Although the interviews were intended to be voluntary, the teachers were all scheduled for interviews but were allowed to opt out of the process if they chose. Twenty-one out of 32 teachers (66%) were interviewed. One teacher requested to be removed from the list, and another declined to be interviewed after the interviewer arrived for the interview. These interviews were all conducted by a second researcher who was part of the original FINE/Iowa State University studies and assigned to participate in this study as part of a graduate assistantship. Each interview began with an explanation of the research being conducted, and written Informed Consent was obtained. A copy of the Statement of Informed Consent is included in Appendix B. The interview schedule questions were designed by the principal researcher who coached the interviewer in the use of the schedule (see Appendix C.)

The third researcher acted as an observer. Her role was to observe one full day in each of two grade levels. She was given a schedule for each day which was a typical schedule for an average (not identified for special education or talented and gifted programming) student; the observations of each class attended were scripted. The observer had extensive experience as a coordinator of student teaching programs and was highly skilled at scripting observations. The teachers had been informed of the visit and the observation component, but some were not aware that their class was to be included in the observations. The observer obtained permission to observe from each teacher prior to the class period.

Between the first and second site visits, the surveys were conducted. The student surveys were given to all students in the school with the exception of those whose parents had

requested they not be in the study; 260 out of 296 surveys were completed. The surveys were given during an Advisor/Advisee period which was extended to allow time for the survey. Teachers administered the survey and gave instructions and read the survey items as necessary.

Two surveys were given to all teachers, full- or part-time; they were instructed to complete the surveys and return them in a sealed, unmarked manila envelope to ensure confidentiality. The surveys were returned to the office, and 29 out of 32 surveys were returned. Both the student and the teacher surveys were entered into Statview™, and preliminary analysis was completed prior to the second visit.

The second visit took place March 8 and 9, 1994. The third day of student focus group interviews was conducted by the principal researcher. The third and fourth days of individual teacher interviews were conducted by the graduate assistant. The third grade level observation was completed by the principal researcher as the third researcher was only available for the first site visit.

Between the first and second and between the second and third site visits the data from the student focus group interviews were analyzed. This analysis was used to guide the subsequent interviews, thus, the third day of group interviews was used to probe and add to the information gained during the first two days. Also, the group interview data played a significant role in the structuring of the individual student interviews which were conducted during the third site visit.

The third site visit took place on April 11, 1994. Eleven individual student interviews were conducted by the principal investigator. The eleven students had participated in the focus group interviews and had volunteered to be interviewed individually. They were selected randomly from the pool of students who volunteered for this phase of the research process. Each was asked at the beginning of the interview process if he/she were still willing to participate, and none opted out at that time.

The principal was interviewed by the principal researcher on April 22, 1994. This interview was tape-recorded and transcribed for analysis. The interview schedule was similar to the teacher interview schedule with some questions related to leadership and the role of the principal added. The principal interview schedule is included in Appendix C.

While it was intended that a preliminary case study report would be shared with some key staff members during the third site visit as a member check (participant validation) of the preliminary findings, this did not take place. Complications with the transcription of the teacher interview tapes caused a delay in the development of the case study reports, and they were not ready by April. A second member check meeting with the entire staff also had to be canceled due to the unavailability of the transcripts. The member check was finally accomplished through having four key staff members (the principal, at-risk coordinator, and two teachers) review the preliminary case study report and provide feedback to the principal researcher.

Morristown Middle School

One of the guidance counselors of Morristown Middle School acted as the on-site coordinator and liaison with the researcher. The first site visit was scheduled for January 25 and 26, 1994. Prior to the visit, telephone conversations and correspondence between the guidance counselor and the researcher outlined the guidelines for the selection of students to be included in the focus group interviews. Parent Informed Consent was obtained, and a few students were excluded from the study. Students were randomly selected to participate in the interviews (102 out of 369; 28%) and were placed in groups of 10-12 by grade level and their schedule for exploratory classes. A schedule for the interviews was developed which allowed all groups to be interviewed in two days.

A sign-up sheet was posted for the teacher interviews, and teachers who were interested in participating selected the time for their interview. Although the interviews were intended to be voluntary, some recruiting was done by the counselor due to the low number of

general education teachers who signed-up initially. Even with the recruiting effort, the number of teachers volunteering to be interviewed was lower than had been hoped; however, the assistant principal and the counselor indicated that a representative cross-section of the staff was included in the interviewees and that the sample was valid and satisfactory from their perspective. In all, 16 out of 39 (41%) of the teachers were interviewed. These interviews were all conducted by the same researcher who conducted the interviews at Jamestown Middle School; and, as at Jamestown, each interview began with an explanation of the research being conducted, and written Informed Consent was obtained. The interview schedule questions were the same at both schools and were designed to allow for full expression by the interviewees.

The third researcher acted as an observer. Her role was to observe one full day in each of two grade levels, and she was given a schedule for each day which was a typical schedule for an average (not identified for special education or talented and gifted programming) student. The observations were scripted for each class attended; the observer had extensive experience as a coordinator of student teaching programs and was highly skilled at scripting observations. The teachers had been informed of the visit and the observation component, but some were not aware that their class was to be included in the observations. The observer obtained permission to observe from each teacher prior to the class period.

The first site visit did not take place in January due to a family illness for the principal researcher. The visit was rescheduled for February 24 and 25, 1994. Although the first day of this visit was accomplished, the second day did not proceed as planned due to a snowstorm which resulted in school being canceled. The schedule for the second day was moved to the second site visit.

Between the first and second site visits, the surveys were conducted. The student surveys were given to all students in the school with the exception of those whose parents had opted them out of the study; 335 our of 369 surveys were completed. The surveys were given

during a Homebase (Advisor/Advisee) period which was extended to allow time for the survey. Teachers administered the survey and gave instructions and read the survey items as necessary.

Two surveys were given to the teachers; they were instructed to complete the surveys and return them in a sealed, unmarked manila envelope to ensure confidentiality. Twenty-three out of 39 surveys were returned surveys were returned to the office. Both the student and the teacher surveys were entered into Statview™, and preliminary analysis was completed prior to the second visit.

The second visit took place March 23 and 24, 1994. At this time, a second day of student focus group interviews was conducted by the principal researcher, and individual teacher interviews were conducted by the graduate assistant. Due to the loss of availability of the third researcher (who was observing the classrooms), one grade level observation was completed by the principal researcher, and the third grade level was observed by the graduate assistant. All observations were scripted, and the scripts and accompanying notes became the data.

Between the first and second and between the second and third site visits the data from the student focus group interviews were analyzed. This analysis was used to guide the subsequent interviews, thus, the second day of group interviews was used to probe and add to the information gained during the first visit. Again, the group interview data played a significant role in the structuring of the individual student interviews which were conducted during the third site visit.

The third site visit took place on May 18, 1994. Eleven individual student interviews were scheduled to be conducted by the principal interviewer. All the selected students had participated in the focus group interviews and had volunteered to be interviewed individually. They were selected randomly from the pool of students who volunteered for this phase of the

research process. Each student was asked at the beginning of the interview process if he/she were still willing to participate, and none opted out at that time.

Only seven students (three eighth graders and four seventh graders) were actually interviewed on May 18, as one eighth grader did not appear at the scheduled time, and the sixth grade interviews conflicted with a scheduled practice for the culminating track day for the school year. Two sixth grade students were interviewed by telephone on May 31 after obtaining verbal permission from the parents for the telephone interviews. These interviews were not tape-recorded but notes were taken by the principal researcher who conducted the interviews.

Due to the travel distance required for the principal researcher, the principals were to be interviewed by telephone. The assistant principal of Morristown Middle School was interviewed on June 3, 1994. This interview was tape recorded and notes from the interview along with counter numbers for direct quotes were used as the data. The interview schedule was the same as that used with the Jamestown principal and is included in Appendix C. The principal of Morristown Middle School was unavailable for an interview.

While it had been intended that a preliminary case study report would be shared with some key staff members during the third site visit as a member check of the preliminary findings, this did not take place for the same reason that it did not take place at Jamestown. Complications with the transcription of the teacher interview tapes caused a delay in the development of the case study reports. The member check was finally accomplished through having six key staff members (the principals, guidance counselors, and two teachers) review the preliminary case study report and provide feedback to the principal researcher.

Data collection

The separation of data collection and data analysis in qualitative research is misleading in that these two processes are simultaneous activities (Merriam, 1988). The qualitative researcher is constantly engaging in analysis from the initial contact with the case study sites

through each interaction with the research process. Tentative hypotheses and research questions direct the interviews and observations; learnings and insights from the data collection process lead to refinement and expansion of the questions. Data collection continues until the ongoing analysis process indicates that the sources have been exhausted and categories are saturated. This section describes the data collection process as it was implemented in both schools.

Qualitative data collection

Smith (1987) defines the aim of institutional ethnography as "explicating the actual social processes and practices organizing people's everyday experience from a standpoint of the everyday world" (p. 151). This ethnographic approach to research enables the researcher to develop "grounded theory" which involves the development of concepts and constructs from the social organization of the context and setting being studied. Ethnography, then, is "a commitment to an investigation and explication of how 'it' actually is, of how 'it' actually works, of actual practices and relations" (Smith, p. 160). Merriam (1988) makes a distinction between anthropological ethnography and educational ethnography maintaining that educational case study is more concerned with society and socialization than with culture and individuals. Glaser and Strauss (1987) assert that sociological case study is appropriate methodology to develop grounded theory in education. This research study uses sociological case study to develop rich, thick description of the sociology of the participating middle level schools and to develop theory regarding the role of the middle school concept in promoting student engagement in the educational process and promoting resiliency through the protective factors.

Four specific qualitative data collection techniques were used in this study. Individual interviews were conducted with the staff of each school. An attempt was made to interview a maximum number of staff while procuring a representative cross-section of the staff. At Jamestown Middle School the interviews were scheduled by the principal for all teachers; 21 out of 32 certified staff members were interviewed. At Morristown Middle School staff

signed-up for interviews on a voluntary basis, and 16 out of 39 certified staff members were interviewed. It should be noted that Morristown Middle School houses grades 4 through 8, but the participants in this study were primarily staff of grades 6 through 8 as these grades are implementing the middle school concept, while grades 4 and 5 function as self-contained elementary classrooms.

The staff interviews were individual interviews with one researcher (the graduate assistant) acting as the interviewer for all staff interviews. The interviews were tape-recorded and transcribed verbatim; both the transcriptions and interviewer notes became the data for analysis. An interview guide/schedule (see Appendix C) was used to guide the interviews with latitude and flexibility in questioning allowed in order to ensure that the participant was afforded the opportunity to provide all the information necessary to explain his/her unique experiences. The questions were open-ended but brought focus on the theoretical constructs of this study. Additionally, the principals of each school were interviewed using an interview schedule modified from the teacher interview schedule (see Appendix C); principal interviews were conducted by the principal researcher of this study.

Two types of interviews (group and individual) were conducted with the students in this study. The students were selected randomly from the class list for each grade level by the principal at Jamestown and the guidance counselor at Morristown. Focus-group interviews were designed with four to twelve randomly selected students per group which enabled access to a larger sample of the student population than individual interviews would have allowed. The interviewer used appropriate group facilitation techniques that maximized the relative safety and trust level of the groups. Because socially and intellectually homogeneous interview groups tend to provide more productive data (Merton, Fiske, & Kendall, 1990), an attempt was made to organize the student sample into homogeneous groupings by peer group or "clique" within each grade level. Each group was organized by grade level and common exploratory period; however, due to the scheduling constraints of the school setting and a

commitment by the researcher to intrude as little as possible on the normal workings of the school, the homogeneity of the groups was compromised. This did not, however, appear to limit participation as most students spoke freely and frequently during the interview process.

These interviews were conducted in a circle with the interviewer on an equal level with the students. Prior to beginning the questioning process, the interviewer explained the purpose of the research and the procedure to be used during the interview. Each interview began with a "go'round" (in-turn response) with students giving their name and what each considered to be the best thing about their school. Following the initial go'round, students were allowed to respond to the questions in a spontaneous, voluntary manner. This continued on each question until no student offered further response.

The groups interviewed included 93 students, 20% of the student population at Morristown, and 103 students, 28% of the student population at Jamestown. The group interviews of students were facilitated by the principal researcher. The data were captured on newsprint in full view of the participants, allowing corrections and clarifications during the interview process.

The use of focus group interview with students is a new research technique to education, and no examples from previous research were found. Due to this lack of precedent, there was a question regarding whether the information gained from the groups would be accurate and free of the influence of peer pressure. To further verify and elaborate on the focus group data, the group interview participants were offered an opportunity to volunteer for individual interviews; 11 students from the volunteers were then randomly selected in each school. The interview schedule for these interviews was similar to the group interview with an emphasis on the individual student's experience. These interviews were conducted by the principal researcher and were audio-tape-recorded. Eleven students at Jamestown Middle School and nine students as Morristown were interviewed; two of the Morristown students were interviewed by telephone and were not recorded, but notes were taken. Due to time and

cost limitations, none of these interviews were transcribed in their entirety. The tapes were played back and key comments noted with the timer on the recorder for future reference. The interviewer notes and tape references became the data for analysis.

Marshall and Rossman (1989) define observation as the "systematic description of events, behaviors, and artifacts in the social setting" (p. 79). The classroom observations for this study were open-ended observations with the observer scripting the events and behaviors occurring during the observation and noting or including copies of materials and artifacts used by students and teachers. These classroom observations, which were structured to follow a typical class schedule for an average student in each grade, became the third source of qualitative data; three days of observation were completed in each school. Two days of observations (one in each school) were scripted by the principal researcher, one day at Morristown was recorded by the graduate assistant (who also conducted the staff interviews), and three days of observations (one at Morristown and two at Jamestown) were scripted by the third researcher who has extensive experience in classroom observation as a coordinator of student teaching for the University of Northern Iowa.

Artifacts provide the fourth source of data for the qualitative aspect of this study. The artifacts contained evidence about the context and background for each school as well as evidence of the factors in the theoretical framework. The artifacts were provided by each school to the principal researcher. Artifacts included items requested as well as additional information provided by the participants. Those items analyzed for Morristown Middle School included the Report of Class Averages, Iowa Tests of Basic Skills; the Student Handbook; the Faculty Handbook; the Iowa FINE Schools Recognition Project Application 1991-1992; and the FINE Recognition Award Winner 1993 Report. Items included for analysis from Jamestown Middle School include the Report of Class Averages, Iowa Tests of Basic Skills; the program brochure for *The Learning Center*: Program for At-Risk Students; Student/Parent Handbook; Teacher Handbook; Memory Books; Course Description booklet; discipline referral records; school

newsletters; Staff Development Three Year Plan 1990-1993; district newsletters; District Goals 1993-1995; class schedule; weekly calendars; NINTH HOUR Referral Policy; and various forms and certificates used to recognize and report student achievement.

Quantitative data collection

Those research questions which are most appropriately answered through quantitative techniques include those related to "how much" or "to what degree" a phenomenon exists or phenomena interact (Merriam, 1988). For this study the questions related to level of engagement and level of readiness were examined through use of survey data in which the responses are quantified and used for triangulation along with interview, observation, and artifact data.

Instrumentation

Student engagement was measured through the use of a 46 item survey with a 5-point Likert scale response ranging from Strongly Disagree to Strongly Agree (see Appendix D.). This survey was developed and field tested by Sweeney (1993) and used in this study by permission. In addition to the survey items, demographic data were requested including co-curricular involvement, free-and-reduced lunch eligibility, participation in special instructional programs, age, gender, and grade. The item analysis provided with the survey identified the factors for comparison. The reliability coefficients for the factors are listed in Table 3.1.

Table 3.1 Reliability coefficients for factors of student engagement

Engagement Factor	Reliability Coefficient
Engagement	.81
Membership	.87
Authentic Work	.89
Ownership	.81
Future Orientation	.72
Peer Support and Esprit	.63
Efficacy	.73

Teacher engagement was measured through the use of a survey instrument which had been developed by the Center for Effective Secondary Schools, Madison, Wisconsin, and used in previous research on teacher engagement by that institution (Louis & Smith, 1992). Although only ten items were related to teacher engagement, other items were included which related to other factors such as negative attitudes toward students, availability of resources needed for teaching, and concerns about safety in the school. Fifty items were measured using a 5-point Likert scale ranging from Strongly Disagree to Strongly Agree (see Appendix D). The statistical analysis for items other than those related directly to teacher engagement was not available to this researcher. The items related to teacher engagement were reported by Louis and Smith (1992) to have a Standardized Item Alpha of .66. Specific items measuring Teacher Engagement are shown in Figure 3.1.

Teacher readiness to meet the needs of all students was measured through the use of a 33 item survey with a 5-point Likert scale response ranging from Strongly Disagree to Strongly Agree (see Appendix D). This survey was developed by Licklider (1994) and used in research with school staff in rural Iowa secondary schools. The items cluster according to specific readiness factors. These factors include capacity, will, and efficacy. Table 3.2 shows the coefficient Alpha for the clusters and for the overall readiness score.

School staff members were asked to label each of the two surveys they completed (readiness and engagement) with the last four digits of their social security number in order to ensure that the data from each survey could be entered together and comparisons made between teacher readiness and teacher engagement. In addition, demographic data were requested including grade level and subject area taught, years of experience, age, educational level, gender, and previous staff development related to students at risk.

Ten Survey Items Measuring Teacher Engagement

6. I frequently take on extra tasks or responsibilities that I think will benefit the school.
11. I wouldn't want to work in any other school.
12. The reputation and performance of this school are important to me.
14. I try very hard to show my students that I care about them
16. It's important for me to know something about my students' families.
17. I try to make myself accessible to students even if it means meeting with them before or after school, during my prep or free period, etc.
19. It is important that as teachers we try to ensure that all students master basic skills and subject-matter coursework.
20. I am always thinking about ways of improving my courses.
23. Interdisciplinary classes benefit teachers as well as students.
24. Given the opportunity, I would take additional college or university courses in the subject area I teach most often.

Figure 3.1 Items measuring Teacher Engagement with the item number from the Teacher Engagement Survey (see Appendix D) (Louis & Smith, 1992, p. 126)

Table 3.2 Coefficient Alpha for factors of teacher readiness (Licklider, 1994, p. 21)

Readiness Factor/Subscale	Coefficient Alpha
Capacity	.79
Preparedness	.81
Problem Acceptance	.68
Will	.88
Responsibility Acceptance	.65
Willingness to Change	.90
Student Potential Orientation	.68
Efficacy	.70
Overall Readiness	.90

Data Analysis

As stated earlier, data analysis begins officially with the initial contact with the sites, although the task of forming categories to analyze qualitative data actually begins with the review of literature and formation of the theoretical framework of the study. Data analysis for this study involved the analysis of the qualitative interviews, observations, and artifacts; the statistical analysis of the quantitative data; and triangulation of these data to provide a single picture for the case studies.

Qualitative data analysis strategies

The qualitative data for this study included transcriptions of staff interviews, notes from individual student interviews, transcriptions of the newsprint data from student focus group interviews, the scripted observational data, and notes regarding artifacts. All transcribed interviews were placed in individual files using *Microsoft Word* word processing program for analysis and coding. In addition, field notes were kept by the principal researcher throughout the entire research process and were analyzed along with other data.

An inductive process was used to analyze all data from each source. This inductive process involved examination of the individual bits of data to identify connections among the information. Words or phrases which shared a common meaning formed groups which became categories. Further examination of the categories enabled each to be labeled with a general word or phrase which explained connection among the data bits. This inductive process was used with all the sources of data, and, with the addition of more data throughout the process, each analysis provided a test to see if the generalizations from one source of data supported those of other data sources. This analysis process began as soon as transcriptions were available and continued until the analysis of all data was complete.

Student group interview data analysis

The analysis process for the transcripts of the student group interviews involved the inductive sorting of the individual concepts within each transcript. Because the data had been

captured on newsprint in phrases and single words from participants, it was transcribed with each single idea as a separate line with a return at the end of each line to create a paragraph in computer terms. A key word from the original question which elicited each bit of information was placed at the end of each paragraph to ensure that the context of the data could be maintained in the sorting process. For example, responses to the question "How do you know that your teachers care about you?" were identified with "*care". When this marking of each data bit was complete, a hard copy of the data was printed.

These separate pieces of data were then coded on the hard copy using specific colored highlighters to identify and "sort" similar ideas/concepts into groups. Using an inductive process to group bits of data with similar characteristics without imposing pre-determined categories onto the data allowed the categories to emerge. This process was as follows: The first data bit was read and its meaning identified; it was then highlighted with a yellow highlighter. The rest of the data were read and all data bits with the same general meaning as the first one were highlighted with the yellow highlighter. Next, the first unmarked data bit was read and its meaning identified; it was highlighted with a blue marker. The data were then all read and highlighted with blue if the meaning matched. This process was completed using a new color of highlighter for each pass through the data until all data were marked.

When each data bit had been color coded, using *Microsoft Word*, a code which identified the highlighter color and grade level of the interview group from which the data originally came was placed at the beginning of each data bit: O/6 for orange/6th grade. For those individual pieces of data which appeared to fit into more than one grouping, the data were duplicated and coded with each code. For example: "playing sports with friends" had been highlighted with "sports" in green and "friends" in blue. It was duplicated and one copy was coded "G/6" and the other coded "B/6". Following the coding, the data were then sorted, using the software "Sort" command, into the categories which emerged as a result of the inductive process.

Following the first sort, the data were analyzed and the categories which had emerged were given descriptive labels. The categories which emerged from the student group interview data were teacher/student interaction, co-curricular activities, behavior management, peer interactions, teacher or principal description, climate, parent and community influence, building and support services, and curriculum-instruction-assessment. Using the "find/replace" operation of the software, the color codes were changed to codes which represented the categories, for example, the code O/6 was changed to TSI/6 (meaning Teacher/Student Interaction and sixth grade). The use of the "/" after each separate item in the codes facilitated the easy replacement of color codes as the "O/" was recognized by the computer as different from any other "O" which may have appeared in the data itself.

The hard copy of the data organized into the preceding categories was analyzed again using the same process (color coding with various highlighters) resulting in a further breakdown of the data into more specific categories within each initial category. Color codes were again placed at the beginning of each individual piece of data, and sorting resulted in the new categories which were labeled after examination and analysis of content. The original coding was maintained such that the coding was now three or four levels. For example, positive oral teacher/ student interactions would be coded "Pos/SpTr/TSI/6". Categories which emerged within each original category were as follows:

- Teacher/Student Interaction (TSI) was further sorted into Extrinsic Rewards (ExR), Feedback (Fdbk), Grades (Grds), Relationship (Rlsp), Extra-Activities (ExA), and Oral responses of the teacher (SpTr) which was further broken down into Positive (Pos) and Negative (Neg) responses.
- Co-Curricular activities (CoC) was sorted into Educational Activities (EdA), Extracurricular Sports (ESp), Recess (Rec), Music (Mus), and Student Council (ScC).
- Behavior Management (BeM) was sorted into Violent Behavior (Vio), Consequences (Cns), Rules (Rls), and Student Behavior (StB).

- Peer Interactions (PrI) was sorted into Grade Levels (GrL), Helpful Interactions (Hlp), Conflict (Cnf), Boy-Girl Interactions (BGI), Cliques (Clq), Judgments (Jdg), and Friends (Frn) which was further broken down into Positive statements (Pos) and Negative statements (Neg).
- Teacher/Principal Description (TDP) sorted into Students' Perceptions (StP), Student/Teacher Relationship (StTr), Decision Making (DM), Equity (Eqty), and Teacher Actions (TrAct) which was separated into Positive (Pos) and Negative (Neg) actions.
- Climate (Cli) separated into Feelings (Flngs), Boredom (Brdm), Fun (Fun), Choices (Chs), Student Awareness (StAwr), and Change (Chng).
- Curriculum, Instruction, and Assessment (CIA) was sorted into Homework (Hmwk), Classroom Activities (Cls), Extra-Activities (ExAct), Exploratories (Expl), Advisor/Advisee (AA), Study Time (Stdy), and Class Work (Wrk).
- Parent/Community Interactions (PCI) did not sort into further categories.
- Building and Support Systems (BSS) sorted into Lunch (Lnch), Recess (Rec), Building (Bldg), Equipment and Materials (EqM), Snacks/Machines (SnM), Transportation (Bus), and Schedule (Schdl).

This reorganization of the data into categories allowed the data to be analyzed for meaning. Patterns in the data were examined when all data sources had been coded. The student group interview data were analyzed, coded, and categorized first in the analysis process. A decision was made to use the categories from this data in the analysis of the other data sources, but conflicting information and new categories were also sought within the other data sources.

Additionally, the literature review and theoretical framework for this study resulted in identification of categories appropriate to this study. These categories influenced the inductive process of the researcher in data analysis, and these categories were compared to the categories which emerged naturally from the data in making inferences and drawing conclusions

regarding the theoretical constructs of this study. Categories related to middle school structures include: developmentally appropriate curriculum, instruction, and assessment; learning teams of teachers and students; core of common knowledge; exploratory programs; advisory and support programs; co-curricular programs; home/school partnerships; school/community partnerships; flexible schedule; and staff preparation; and staff empowerment. Preliminary categories related to student engagement include competence, caring, success, personal support, fairness, clarity of purpose, extrinsic rewards, intrinsic rewards, sense of ownership, connection to the "real world", and fun. Categories for protective factors which promote resiliency include opportunities for meaningful involvement, high expectations, caring and support, and skill building. Teacher engagement is exemplified by engagement with the school as a social unit, with students as individuals, with academic achievement, and with the subject and body of knowledge being taught. Principal leadership is categorized by examples of principal behavior, such as buffering teachers from outside intervention, being available and participating in the daily routine, delegating and empowering the school staff, confronting disengaged teachers, and providing leadership through vision, values, and beliefs.

Individual student interview data analysis

The individual interviews of students were used to validate and triangulate the student group interview data. Because these interviews were not transcribed, a different process of analysis was required. The tapes were played back and notes were made regarding statements which agreed with and validated the categorization of the group data as well as disconfirming and/or new information and ideas. These notes were coded with the counter number on the tape playback for reference during further analysis and used during the writing of the case study reports. Data which was not congruent with the categories from the group interviews was to have been categorized into new groups, however, no information emerged from the individual interviews that had not already been included in the group interviews.

Teacher interview data analysis

The transcripts from the individual interviews with teachers were each transcribed verbatim. The transcripts were placed in *Microsoft Word* in order that they could be formatted and manipulated in the same manner as the student group interview data. Each transcript was read holistically to gain an understanding of the interview and its context before being broken into single idea units for coding. The coding and categorizing of the teacher data was done through an inductive process with the categories for the student data acting as the beginning structure for the categorization of this data. However, there were some inherent differences in the two data sources which resulted in some differences in the categories. Teacher/Student Interactions from the teachers' perspective were considered a separate category from Teacher/Student Interactions from the students' perspective. Additionally, a Peer Interaction category involving teachers' perceptions of each other, the principal, and collegial relations between teachers emerged as a category for teachers' data. There was not a separate category for students, although there were data regarding the students' perceptions of the interactions between and among the teachers.

Observation data analysis

Because observation data was used in conjunction with interview data, the observation transcripts were analyzed according to the categories which emerged from the interview data. Data which did not appear congruent with existing categories were to have been placed into appropriate new categories. However, the observations were congruent with the holistic description provided by the student and teacher interviews, and no new categories were formed.

Artifact analysis

Content analysis was used in examining artifacts from each school. Each artifact was examined, and the salient data were highlighted and marked with 'sticky notes'. Written notes were taken from the artifacts and coded by category. The categories for content analysis were

the same ones used for the interview transcriptions, and notes from the artifacts were organized by those categories. All data items in the category files maintained the connection to the original sources through the coding system which identified the source and nature of the data. New categories, which related primarily to background information about the school and students, were added and coded as they emerged from the analysis process.

Quantitative data analysis strategies

Statistical techniques for the analysis of data were selected according to the research questions in order to ensure the accuracy of the conclusions drawn from that analysis. All survey data were entered into *StatView* (Version 4.0) for the Macintosh computer. For purposes of this study, statistical techniques included primarily descriptive statistics including frequency distributions, means, and measures of central tendency. Inferential statistics were used for comparison purposes with tests on means (t-test and ANOVA) the primary techniques.

Statistical analysis of student engagement

Student engagement was measured through the use of a 46 item survey with a 5-point Likert scale response ranging from Strongly Disagree to Strongly Agree (see Appendix D). Frequency distributions (Appendix E) were used to identify the percent of students indicating agreement (a response of 4 or 5) or disagreement (a response of 1 or 2) with the statements in the survey. The means of the student engagement index and of each factor within engagement for each school were compared to each other for significant differences between the schools. These data were also disaggregated and examined for trends among categories including gender, socio-economic status (identified through free-and-reduced lunch program), grade level, involvement in co-curricular activities (specifically sports and music programs), and participation in special instructional programs (such as special education or talented and gifted programming.)

Statistical analysis of teacher readiness and engagement

Teacher readiness to meet the needs of all students was measured through the use of a 35 item survey with a 5-point Likert scale response ranging from Strongly Disagree to Strongly Agree (see Appendix D). The results of previous research by Licklider (1994) were used to compare the readiness of Jamestown and Morristown staff with the readiness of staff from other rural Iowa secondary schools. Frequency distributions (Appendix E) were used to identify the number of teachers indicating agreement (a response of 4 or 5) or disagreement (a response of 1 or 2) with the statements in the survey. The readiness means of the two schools were compared to each other and to the results of Licklider's study which included a sample of 697 school staff in 287 rural Iowa secondary schools. In addition, the means each of the readiness factors for the schools were compared to each other and to the data from the statewide study. Data on readiness for each school were also analyzed through ANOVA to examine the effects of such factors as level of education, years in teaching, gender, and previous staff development training related to working with students at risk.

Teacher engagement was measured through the use of a survey instrument which was developed by the Center for Effective Secondary Schools, Madison, Wisconsin. Because the statistical analysis of the factors other than teacher engagement which were measured by this instrument was not available, those extra items were included only in the frequency distribution (Appendix E) which indicates the number of teachers responding in agreement (a response of 4 or 5) or disagreement (a response of 1 or 2) and means and standard deviations for each item were determined. The means on teacher engagement for each school were compared to determine a difference between schools. Data on teacher engagement for each school were also analyzed through ANOVA to determine the effects, if any, of level of education, years in teaching, gender, and previous staff development training related to working with students at risk. Although subject area and grade level taught were asked in the demographic section of the survey, these were unable to be analyzed statistically due to the large number of teachers

who reported teaching more than one grade level or subject area. Additionally, age and years of experience were asked, but statistical analysis was not possible due to a large number of missing responses to these items.

The qualitative data analysis process generated a series of computer files organized by those categories which are relevant and salient to the theoretical framework of the study. The quantitative data analysis offers a numeric representative of the levels of student engagement, teacher engagement, and teacher readiness. All these data were used to develop the rich description of each school which became the case study reports. The evidence of similarities and differences between the schools was identified through the cross-case analysis, and the evidence of interrelationships among the middle school structures, engagement, and resilience provided the basis for examination and discussion of the theoretical framework of this study.

Development of the case studies

The rich description of the two schools emerged from data analysis process through the triangulation of the data sources and the examples within the original and new categories. The data from each of the sources were organized according to school and the theoretical constructs of this study. The data were then used to write a case study for each school which includes background information about the school and evidence relevant to the constructs of this study.

Throughout the data collection and analysis process, preliminary findings and perceptions of the descriptions for the case analysis of each school were shared through discussion with school coordinators and other key informants in each site in order to validate the conclusions from the analysis process. In addition, the draft of the case study for each school was shared with key school staff for feedback, validation, and refinement.

Cross-case analysis

Because generalization from a single case is very different from generalization from multiple cases, cross-case analysis is most effective in the identification of major patterns within social phenomenon (Herriott & Firestone, 1983). While maintaining the holistic data

from each site, a general and comparative analysis was used to identify the similarities and differences between the two schools. The quantitative data analysis tested statistically significant differences regarding levels of student engagement, teacher engagement, and teacher readiness. The disaggregation of the data using ANOVA according to groups within the student and staff population also provided a deeper look into the location and causes of the numeric differences.

The interview data, observation notes, and artifact notes were analyzed specifically for differences and similarities between the schools. The triangulation of this data with the quantitative data supported the validity of the findings related to level of engagement and readiness with the words and experiences of the students and staff and offered an explanation of what the actual differences were in practice and how they came to be that way.

The cross-case analysis formed the basis for the analysis of the research questions for this study. Both the information offered by the individual case studies and the cross-case analysis inform the theoretical constructs and provide the building blocks for the "grounded theory" regarding the roles, influences, and relationships between and among the policies and practices of the student-centered middle level school; the teacher/administrator influences of principal leadership, teacher readiness and engagement; student engagement; and the protective factors which promote resiliency.

Analysis related to the research questions

Within and against this background information provided by the case studies and cross-case analysis, the research questions were examined; and the data was further analyzed as it specifically related to the theoretical framework of this study. The examination of the research questions also incorporated the ideas and concepts from the review of related literature. The research questions and the data techniques used to examine each question are depicted in Figure 3.2.

Research Question	Factor Examined	Research Technique			
		Survey	Interviews	Observation	Artifacts
1	Student-centered Middle School		X	X	X
2	Teacher Engagement	X	X	X	
3	Teacher Readiness	X	X	X	X
4	Principal Engagement	X	X	X	
5	Factors which influence Student Engagement	X	X	X	X
6	Student Engagement	X	X	X	
7	Factors which promote resiliency		X	X	X
8	Influences of all the factors listed above	X	X	X	X

Figure 3.2. Research questions, theoretical factors, and research techniques used to examine each

A discussion of each research question and the application of the research techniques used to examine each question follows:

1. To what extent and how does each school exhibit the policies, procedures, and practices of the student-centered middle school?

This question was addressed through qualitative group and individual student interviews, individual staff interviews, observation, and artifact analysis. The analysis of this data established the level of implementation of the components of the student-centered middle

level school. Specific structures to be examined were developmentally appropriate curriculum, instruction, and assessment; learning teams of teachers and students; core of common knowledge; exploratory programs; advisory and support programs; co-curricular programs; flexible schedule; staff knowledge of early adolescent development characteristics; and staff empowerment. The qualitative data allowed a description of these components from the perspective of both students and staff. Home/school partnerships and school/community partnerships are other elements of the student-centered middle school which were not a major part of this study due to the research design limitations and were not included in the case studies. Based on a holistic examination of each of the components of the student-centered middle level school, each school was placed on the continuum shown in Figure 3.3. for each of the eleven components of the middle school concept.

Traditional Junior High	Emerging Middle School	Student-Centered Middle School

Figure 3.3. Continuum showing the level of the components of the middle school concept

2. What is the level of teacher engagement in each school, and how is engagement demonstrated by teachers in each school?

Four types of teacher engagement were examined: engagement with the school as a social unit, with the students as whole unique individuals, with academic achievement, and with the body of content knowledge. Evidence of these factors was identified within the words and experiences of the teachers through the interview data, classroom observations, and artifact analysis. The level of teacher engagement was also examined through a quantitative survey.

Statistical analysis of the teacher engagement index included comparisons of the means of each school, and the frequency distributions by item were analyzed to gain insight into the teachers' perceptions of their engagement as well as the other factors which were included in the survey items. The level of teacher engagement for each school was identified on the continuum for each of the four types of engagement: engagement with the school as a social unit, with students as holistic individuals, with academic achievement, and with the body of content knowledge (see Figure 3.4.).

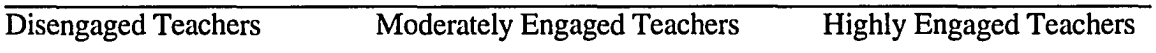


Figure 3.4. Continuum of level of teacher engagement

3. What is the level of teacher readiness to meet the needs of students in each school and how do teachers exemplify that readiness?

The level of readiness was established through qualitative interviews which were also used to describe the evidence of readiness of the staff to meet the needs of students. The quantitative survey was used to supplement the qualitative data and provide further information related to the level of readiness. The statistical analysis of the readiness survey was described above; this analysis; including the ANOVA by level of education, years in teaching, gender, and previous staff development training related to working with students at risk; contributed to the determination of the level of readiness. The individual interviews with staff provided insight into the level of readiness as well as evidence of how teachers demonstrate capacity and act upon their will and sense of efficacy to make changes and to meet the needs of all students.

Lack of Readiness	Moderate Readiness	High Readiness
Lack of Capacity	Moderate Capacity	High Capacity
Lack of Will	Moderate Will	Strong Will
Lack of Efficacy	Moderate sense of efficacy	Strong sense of efficacy

Figure 3.5. Continua of the level of readiness and the readiness factors

The readiness of the staff was profiled according to the continua of the three factors of readiness shown in Figure 3.5.

4. To what extent and how do building principals of each school demonstrate leadership?

Level of principal leadership was determined through qualitative interviews with students and staff as well as analysis of teacher responses to items in the Teacher Engagement Survey related to principal behavior. Because the information available about the survey did not include an item or factor analysis regarding principal behavior, there was no attempt to analyze these items with inferential statistical techniques. However, the frequency distribution, means, and standard deviations did provide information regarding teachers' perceptions of the principal and his/her engagement behaviors. The interviews with students, teachers, and principals also contribute to the description of behaviors which are evidence of engagement by the principal; specifically: buffering teachers from outside intervention; availability and participation in the daily routine; delegating responsibility and empowering school staff; confronting disengaged teachers; and providing leadership through vision, values, and beliefs. The profile of principal leadership is represented in Figure 3.6.

Lack of Buffering	Occasional Buffering	Consistent Buffering
Not available	Available only on occasion	Highly Available
Directive	Delegates some decisions	Full Empowerment
Ignores disengaged teachers	Recognizes disengaged teachers	Confronts disengaged teachers
Lack of vision and values	Inconsistent and unclear vision	Clear vision and values
Traditional Leadership	Transitional Leadership	Transformational Leadership

Figure 3.6. Continua representing the levels of the factors of principal leadership

5. To what extent and how are the factors which promote student engagement demonstrated in each school?

The qualitative interviews and observation were used to establish and describe the factors which influence student engagement; membership and authentic work. Additionally, some items on the survey were designed to elicit the students' perceptions of the factors which promote engagement; an examination of the frequency distribution on those items contributes to the description of those factors. The interview and observation data were also examined for evidence of the factors which promote student engagement; specifically **membership**, which includes caring, success, personal support, fairness, and clarity of purpose; and **authentic work**, which includes extrinsic rewards, intrinsic rewards, sense of ownership, connection to the "real world", and fun. Based on the holistic examination of the data regarding the factors

Low Membership	Moderate Membership	High Membership
Low Authenticity	Moderate Authenticity	High Authenticity

Figure 3.7. Continua indicating levels of the factors which influence student enagement

that promote student engagement, each school was placed on the continua shown in Figure 3.7.

6. To what extent and how do students in each school exhibit engagement in the educational process?

Quantitative surveys were used to establish the level of engagement, and qualitative interviews and observations provided a description of the engagement behaviors of students. The frequency distributions of the survey items provide insight into the specific factors of student engagement for each school, while the tests on the means make comparisons between the schools and between and among groups within the schools. Level of engagement was analyzed in each school for participation in sports and music programs, for placement in special education and talented-and-gifted programs, for socio-economic status as defined by free-and-reduced-lunch eligibility, for gender, for grades earned, and for grade level. The interview and observation data also indicated level of student engagement as evidenced by the amount of participation in academic work, intensity of student concentration, enthusiasm and interest expressed, and the degree of care shown in completing work. This evidence was identified not only in the words and experiences of the students, but also in the perceptions of the staff. The level of student engagement was identified on the continuum for each school (see Figure 3.8.)

Disengaged Students	Moderately Engaged Students	Highly Engaged Students

Figure 3.8. Continuum of level of student engagement

7. To what extent and how are the protective factors for resiliency present in each school?

The presence of these factors was determined through qualitative interviews with students and staff, observations, and artifact analysis. As with the engagement factors, evidence was identified related to these specific factors: caring and support; opportunities for meaningful involvement; high expectations; and skill building. In this case, the words, experiences, and perceptions of the students and staff through the interviews along with the classroom observations and evidence within the artifacts were used to develop a complete description of these factors within each school. The continua shown in Figure 3.9. were used to depict the relative level of the protective factors:

Lack of care and support	Moderate care and support	Strong care and support
Few Opportunities	Opportunities lack meaning	Meaningful Opportunities
Low or unclear Expectations	Inconsistent Expectations	High and clear Expectations
Little skill building	Academic Skills Only	Holistic Skill Building

Figure 3.9. Continua showing the levels of the protective factors which promote resiliency

8. **To what extent and how do the factors of the student-centered middle school structures, the adult influences (teacher engagement, teacher readiness, principal leadership), the factors which influence student engagement (membership and authentic work), student engagement, and the protective factors which promote resiliency influence one another?**

The case studies and cross-case analysis, incorporating all the data collection techniques listed previously, were used to determine the relationships between and among these concepts. The research design for this study was case study research using qualitative methodology and quantitative techniques. As such, no attempt has been made to establish statistical relationships between and among these concepts, rather qualitative analysis taking a sociological approach was used to formulate theory regarding these factors and their influences upon each other.

The case study reports provided a profile for each school. These were compared and contrasted and evidence cited which documents the differences and similarities. The strength and relationships among factors was examined for each school and in the cross-case analysis. In addition, the literature regarding these theoretical constructs was used as another source of evidence related to the relationships among these factors. The theoretical model provides a framework for the examination of these factors as they are evidenced in the two schools being studied.

Chapter 3 has included background information of this research study as well as a description of the procedures used in each school in the development of the case studies. Specific data collection and analysis techniques were described for both qualitative and quantitative methodology, and the application of those research techniques in answering each of the research questions outlines the final step in the research process. The cross-case analysis was the final step in the data collection and analysis process and formed the basis for the interpretations related to the theoretical constructs of this study. The findings, conclusions, and implications of this study are discussed in Chapters 4 and 5.

CHAPTER 4. FINDINGS

This study was designed to determine the extent to which the student-centered middle school structures; staff influences of teacher engagement, teacher readiness, and principal leadership; student engagement and protective factors that promote resilience in two middle level schools are related. Case study methodology was used triangulating qualitative interviews, observations, and artifact analysis as well as quantitative survey data to determine the level of the factors above in the two middle schools in the study. This chapter begins with a case study analysis for each school. Each includes a description and supporting examples of the student-centered middle level school policies, practices, and procedures in each school; of the levels of teacher engagement, teacher readiness, and principal leadership in each school; levels of student engagement and the factors which influence student engagement in each school; and level of the protective factors that promote resiliency. These levels are shown on a continuum for each factor of this study which provides a profile for each school.

Following the case study reports, a cross-case analysis of the two schools is provided that delineates similarities and differences between the schools. It provides the basis for conclusions reached related to the research questions.

Case Study

Each case study follows the same format. Background information about the school and its students and staff is provided prior to the description of the concepts studied. Next is a description of the practices in each school which support or are in conflict with the literature base on student-centered middle school practices; specifically staff knowledge of early adolescent developmental characteristics; core of common knowledge; developmentally appropriate curriculum, instruction, and assessment; learning teams of teachers and students; exploratory programs; advisory and support programs; co-curricular programs; flexible schedule; and staff empowerment. Home/school partnerships and school/community

partnerships, two other components of the middle school concept, were not examined due to the difficulty in collecting data to assess them and are not included in the case studies .

Each case study also includes a discussion of the teacher and administrator influences–teacher engagement, teacher readiness, and principal leadership. The level of each factor in each school and the evidence which operationalizes these factors is described. Student engagement and the factors which influence student engagement in each school are described in the same way. Finally, the protective factors that promote resiliency are identified and described.

Jamestown Middle School

Jamestown Middle School is the only middle level school in its school district. District enrollment is approximately 1,260 students; Jamestown has approximately 300 students in grades six through eight. The school has one principal, 19 full-time certified staff, 13 part-time certified staff (some of whom are shared with other attendance centers in the district), and 6 non-certified support staff. The district has two elementary schools (K-5) and one high school in addition to Jamestown Middle School. There is also a two-year college in the community. The community is socially and economically diverse with a strong agricultural base and some light industry. The socio-economic status of families ranges from welfare recipients to professional families connected with the college and the management level employment with the industry in the community.

The district has a secondary school program for at-risk students, *The Learning Center*, which serves seventh and eighth grade students in the middle school. The talented and gifted program serves the TAG population of the middle school with a pull-out program. Special programs also include Chapter One, Resource Room, RSDS (Renewed Service Delivery System) tutoring, and a multi-categorical self-contained with integration program. The district is a receiving district for special needs students from smaller neighboring districts as well as serving the district special needs population.

The majority of students are white and middle-class ES with very few minority students. Approximately 28 percent of the students are eligible for the free-and-reduced lunch program. The Iowa Tests of Basic Skills are used to measure student achievement for each grade level and serve as an indicator of overall academic achievement for the school population. When compared to the national norms, all three grades of students at Jamestown score higher than the national average on all test batteries. Results of the Fall, 1993, testing are shown in Table 4.1.

Table 4.1. Percentile Rank of the Average Standard Score on National School Norms for the Iowa Tests of Basic Skills by grade level for Fall, 1993, Jamestown Middle School

Test Battery	6th Grade	7th Grade	8th Grade
Vocabulary	55	72	74
Reading	66	92	69
Language Skills	87	94	89
Work-Study Skills	69	83	76
Mathematics Concepts	82	88	79
Mathematics Problems	87	93	88
Social Studies	80	95	73
Science	96	95	89

n = 296

The teaching staff is experienced staff; no teacher has fewer than 10 years teaching experience. The age of the staff also reflects their experience with the range of ages from 31 to 65 years. Many of the staff have taught in the same building for almost their entire career; eight have taught only at Jamestown; five taught between one and three years somewhere else and have been at Jamestown at least 15 years; one recently transferred to the middle school from another building in the district; and the remaining taught in other districts before coming to Jamestown with the most recent arriving four years ago. The district reorganized the grade level configuration of its buildings seven years ago, thus, although these teachers have been

together in the district, they have only been together in this building since 1986. A majority of the staff have at least fifteen semester hours beyond the Bachelors' degree and six staff members report having at least a master's degree. There are 19 male and 13 female staff members listed in the 1993-1994 Class Schedule; all staff members are white.

Staff development has been provided to the staff through a district level staff development plan. The 1991-1992 school year staff development focused on assessment strategies; one half-day session and six two-hour early out afternoons were used for this training. In 1992-1993, the focus was on outcome-based education; this initiative was dropped when the state Department of Education abandoned their outcomes project. The 1992-1993 staff development consisted of seven two-hour sessions, either late start or early out school days. The 1993-1994 staff development for Jamestown Middle School included a study of the middle school concept which took place during seven two-hour early out or late start sessions. Representatives from another middle level school (Glen Creek) presented their model for the middle school and shared their implementation strategies. In addition, teams of teachers have been sent to the area-wide inservice days which offer sessions on alternative assessment, outcome-based education, thinking skills, and instructional technology.

The principal is male and has been a principal 33 years, the last seven at Jamestown. In 1986, the district reorganized its grade configuration from K-4, 5-6, 7-9, and 10-12, by closing two elementary attendance centers, adopting a K-5, 6-8, 9-12 configuration, and creating the middle school. Previously, the principal was administrator of the 5-6 grade level attendance center and voluntarily transferred to the middle school in the reorganization. His education and experience background is as a music teacher and an administrator at the elementary level. In 1993, he was selected as the 1993-1994 Area Education Agency/School Administrators of Iowa Outstanding Middle Level Principal.

Structures of the student-centered middle level school

The description of the programs, practices, and policies of the student-centered middle level school at Jamestown Middle School is based on the interviews with teachers, principal, and students as well as the observations and artifacts. At the conclusion of the discussion of each of the nine components of the student-centered middle level school, the current practices related to each will be placed on a continuum which indicates where the school is in its transition from traditional junior high practices to the student-centered middle school concept.

Staff knowledge of early adolescent developmental characteristics

The literature on the middle school repeatedly emphasizes the need for staff in middle schools who are well prepared and knowledgeable about the developmental characteristics of the early adolescent. This knowledge is evidenced both in the pre-service preparation of teachers as well as in the staff development opportunities afforded to the teachers and is demonstrated in practice.

The staff handbook of Jamestown Middle School contains a section which outlines the developmental characteristics of the young adolescent and identifies some implications for middle school education. The handbook also contains further information on the cognitive development of the early adolescent as provided by Dr. Greg Stefanich, University of Northern Iowa.

In addition to this information provided to all teachers, a few of the teachers have pre-service and in-service training related to the developmental characteristics of the early adolescent. Two of the teachers received training in their baccalaureate work which was specific to the middle school, although the state has since dropped that specific certification. Many report participation in building in-service on the middle school; however, further probing reveals that the training focused on the middle school concept and practices but not specifically on the developmental characteristics of the middle level student.

The staff consistently describe their students as "typical" and "normal" middle school kids. They reference the behavior of students and the ways that students interact, and most express a fondness for the middle level student and a personal choice to work with this student.

> Oh, just very typical...They are enthusiastic, they're bored, they say, all the time, but really they're not, all you have to do is stir that up a little...they're loud, they're fun, they're.....intelligent.

> There's a lot of socializing, a lot of interaction, a lot of positive interaction. I see very little shoving and pushing...you know, negative interaction on the part of the students...there's bumping...that's the nature of the beast.

Instructional practices observed in the classroom reflect traditional secondary teaching with lecture/discussion the primary means of presenting information to students. Experiential techniques such as cooperative learning, interdisciplinary instruction, inquiry-based learning, etc. are not used to meet the physical, cognitive, social, and emotional needs of the students.

Although the staff describe of middle level students based on their personal experience, they do not seem collectively to have received training or opportunities to discuss the implications of these characteristics for the educational process of the school. The instructional practices do not reflect application of an understanding of the developmental needs of the early adolescent. The knowledge of the staff regarding the developmental characteristics of the early adolescent is just below the awareness level as reflected in Figure 4.1.

Little knowledge — Awareness knowledge — Applied knowledge

Figure 4.1. Level of staff knowledge of the developmental characteristics of early adolescents at Jamestown Middle School

Core of common knowledge

The core of common knowledge is defined in the Carnegie Report, Turning Points, as curricula and instruction programs which teach basic academic skills, critical thinking, healthful lifestyles, and active citizenship through integrating curriculum across disciplines and emphasis on learning as well as testing.

Jamestown Middle School has a core academic framework consisting of science, mathematics, social studies (American History for eighth grade), language arts (including speech as an exploratory for eighth grade), and reading. The curriculum of these subjects is defined by the district curriculum guides and is organized around a subject-specific objective-based curriculum model.

Basic academic skills are a part of the curriculum and instruction in the subject area classes. Assistance is provided for students who are lacking these basic skills through Chapter One, special education, and the at-risk tutoring program.

There is less evidence of the other core of common knowledge issues identified by Turning Points: critical thinking, healthful lifestyles, and active citizenship. The social studies curriculum does incorporate citizenship, and *Skills for Adolescents* includes healthy life-style choices. Jamestown Middle School functions at the traditional junior high level but is beginning to emerge toward the middle school concept on the core of common knowledge which is reflected in Figure 4.2.

Traditional Junior High	Emerging Middle School	Student-Centered Middle School

Figure 4.2. Extent to which the core of common knowledge of Jamestown Middle School reflect the student-centered middle school

Developmentally appropriate curriculum, instruction, and assessment

Developmentally appropriate curriculum, instruction, and assessment for the middle level student is defined by the literature as curriculum which is connected to the "real world" of the student and uses an interdisciplinary approach to enable students to make connections to their prior learning (Beane,1990,1991; George, Stevenson, Thomason, & Beane, 1992; Manning, 1993; Stevenson, 1992). Instruction that is developmentally appropriate is experiential and active learning and utilizes instructional strategies that require the student to become involved in the learning process, such as cooperative learning, inquiry-based instruction, and constructivist learning. Assessment is connected to the knowledge and skills being taught and provides the student with immediate feedback on his or her performance.

The curriculum of Jamestown Middle School is organized as a core academic framework: science, mathematics, social studies (American History for eighth grade), language arts, and reading; and exploratories: industrial arts, art, *Skills for Adolescents*, keyboard, word processing, home economics, peer helping, and general music. All students also receive instruction in physical education. The curriculum for each subject area is defined by district curriculum guides which articulate the goals and objectives of the curriculum K-12. These guides are organized around specific content areas and identify the discreet objectives to be included in the curriculum at each grade level.

The curriculum does not include an interdisciplinary approach, although one language arts teacher tells of team teaching with the science teacher in the instruction related to writing research papers. The science teacher makes the research assignment and focuses the topics; the language arts teacher teaches the research and writing process.

The instruction in the classroom is primarily lecture/discussion. With one exception, in the classrooms observed, the core academic classrooms are organized in rows of desks or tables facing the teacher station in the front of the room. Teachers use the chalk board or

overhead to illustrate the concepts being presented. The lecture/discussion is interactive in some classes; for example, a science lesson was presented through lecture/demonstration, and then the students were invited to the front of the classroom in small groups to try the experiment while the others completed an assignment at their seats. Two differing perceptions of lecture instruction are offered by the teachers:

> I let the textbook give the basic knowledge, and I try to update...It seems to work pretty good with the kids as far as keeping their level of interest when I'm lecturing to them...Every once in a while I'll throw in a question on it [a test] that I've updated for the kids.

> This is the type of stuff they like to do...that kind of hands on stuff to do. That's what they like. To sit and listen to a bunch of lecturing, they don't get into a bunch of that so we try to keep them involved.

The students agree their role in learning is passive. As "the teacher talks and explains", students perceive they are to "listen" and to "take notes on what the teacher is saying" or to "take notes on movies". Students also read from the textbook and do worksheets. Students in all grade levels describe use of worksheets for classroom assignments and homework and express that the "worksheets all blend together."

Teachers use games to enhance the learning, and students report in all three grades that the games make the learning more interesting and fun. Seventh and eighth grade students tell of science labs with "hands-on" activities which they assert help them learn. "Science is cool," said a seventh grade student. Eighth grade students tell of giving presentations to their classes, which they believe increases what they learn.

Assessment of student achievement is accomplished through paper-and-pencil testing most of the time. Multiple-choice, true-false, and short essay questions are common for all core academic classes. The language arts teachers use writing samples and some use a form of portfolio for student writing, although none uses formal portfolio assessment. Exploratory classes are more likely to have performance-based assessment than core classes, but these classes also utilize traditional testing methodology for measuring student progress. In one

exploratory class, student projects are self-assessed as well as graded by the teacher; the teacher's assessment determines the grade, however. *Iowa Tests of Basic Skills* are used to measure student academic achievement in a more general sense.

In summary, the curriculum, instruction, and assessment at Jamestown Middle School are traditional. The curriculum is organized and presented in content areas, the instruction is primarily lecture/discussion, and assessment is mostly paper-and-pencil testing. The curriculum, instruction, and assessment of Jamestown Middle School appear to be more closely aligned with those of the traditional junior high as shown in Figure 4.3.

Traditional Junior High	Emerging Middle School	Student-Centered Middle School

Figure 4.3. Extent to which the curriculum, instruction, and assessment of Jamestown Middle School reflect the student-centered middle school

Learning teams of teachers and students

The student-centered middle level school is intentionally structured in teams of teachers and students who work together in the learning process. The teachers meet on a daily basis to plan interdisciplinary curriculum and instruction as well as to discuss concerns related to individual students. The evidence about the existence of learning teams in Jamestown Middle School is found in the interviews of the staff and the observations and artifact data.

Jamestown Middle School is not formally organized into learning teams although informal networks of teachers do exist through which some professional sharing of ideas and concerns takes place. The only team teaching reported by the teachers was the science/language arts research paper discussed previously. Teachers indicate that they have no

formal opportunity to share and discuss student concerns or curriculum issues; informal sharing has to take place in the lounge or at lunch.

> ...if we have contact with teachers...that's our own doing. You know there's no real time available for that. Before school, after school if you can catch people, if you happen to share your lunch...or share common planning time...at break you try to do it. That's one of the things they're talking about doing next year is the common planning time...I would think that would help people be together for the purpose of teaching.

At this time, Jamestown school is organized more like a traditional junior high with no formal arrangement of students and teachers into learning teams, and only minimal team teaching taking place on an informal basis. This is reflected on the continuum in Figure 4.4.

Traditional Junior High	Emerging Middle School	Student-Centered Middle School

Figure 4.4. Extent to which the learning teams of teachers and students of Jamestown Middle School reflect the student-centered middle school

Exploratory programs

The exploratory program of the student-centered middle school includes those courses which often become electives at the high school level. These include visual arts, music/performing arts, industrial technology, home economics, keyboarding and computer education, and guidance. Students experience each of the exploratories during the course of a year in the middle school and have the opportunity to increase awareness of these curriculum options and to explore talents and skills without having to choose some and eliminate others from their learning experiences. The focus of the exploratories is on skill building, and grading is usually pass-fail.

Exploratories offered to all three grades at Jamestown Middle School include industrial arts, visual arts, *Skills for Adolescents*, keyboarding and word processing, home economics, peer helping, and general music. Sixth grade students have the opportunity to experience art, keyboarding, *Skills for Adolescents*, industrial arts, and vocal music. Seventh grade students experience art, home economics, industrial arts, *Skills for Adolescents*, vocal music, and word processing. Eighth grade students do not have the opportunity to experience all the exploratories but must elect four choices from art, home economics, industrial arts, Land-O-Plenty (an agricultural technology course), Peer Helpers, speech (with a drama emphasis), and vocal music. Student progress is reported by letter grade.

While sixth grade students spontaneously report that "exploratories are fun", and they consistently assert that "exploratories are the best" and "should not be changed," seventh and eighth grade students did not comment on the exploratories.

The exploratory offerings of Jamestown Middle School provide students with the opportunity to experience a variety of skill and knowledge content areas. These offerings have been designed to meet the needs of the unique students of this community through such courses as Land-of-Plenty, *Skills for Adolescents*, and the drama-based speech class which allows eighth grade students to perform in a one-act play. However, the eighth grade students must elect rather than experience all the exploratories. The Jamestown Middle School exploratory courses are emerging toward the middle school concept as indicated in Figure 4.5.

Traditional Junior High	Emerging Middle School	Student-Centered Middle School

Figure 4.5. Extent to which the exploratory programs of Jamestown Middle School reflect the student-centered middle school

Advisory and support programs

Advisory and support programs are a crucial component of the student-centered middle school as this critical stage in the emotional and social development of the young adolescent demands extra attention to these developmental characteristics. The role of the advisory program is to provide every student with an adult advocate and a supportive environment among the peer group as well as provide an instructional setting for the development of life skills such as decision making, goal setting, problem solving, and complex thinking. The other support programs, including the guidance services, are designed to meet the individual needs of students as they experience situations beyond the normal adolescent emotional volatility and to provide the extra support needed to thrive despite adverse circumstances.

Advisory and support programs at Jamestown Middle School are typical of those found in the traditional junior high school model. Movement toward the middle school concept is evidenced in the presence of an Advisor/Advisee program, inclusion of the *Skills for Adolescents* curriculum in the exploratory offerings, and *The Learning Center* program for at-risk students in the seventh and eighth grades in addition to the traditional guidance services available to individual students and their families.

Two guidance counselors are available part-time each day for counseling with individual students or groups of students. One of the guidance counselors is the instructor for *Skills for Adolescents*, a curriculum which includes decision making and problem solving along with information and skill building related to health issues such as substance abuse and wellness. This curriculum is commercially developed and utilizes primarily lecture/discussion and worksheets as instructional strategies.

The second guidance counselor also coordinates the at-risk program. *The Learning Center* is a program for at-risk students in seventh and eighth grades who are referred by classroom teachers for extra assistance academically. Students receive tutoring to improve their achievement in the general education classroom, instruction and assistance with study skills

and goal setting. A student assistance team receives referrals from staff regarding students who are not succeeding in school and appropriate interventions are implemented.

The Advisor/Advisee (A/A) program meets daily at the beginning of the day for eight minutes. Students remain in the same A/A group throughout the three years at the middle school, and the three grade levels are mixed within each A/A group. This program is intended to provide "each student with an adult advocate who knows them on a personal basis" as well as to create "relationships of support among the students". The A/A time is used primarily for lunch count and announcements with only a few minutes for student and teacher interaction. Occasional special events are also coordinated through the A/A program. Students share that "homecoming, [decorating] Christmas doors, and SQUIRT" (Sustained Quiet Individual Reading Time) are some of the opportunities for involvement offered through A/A.

There is concern expressed by both students and teachers about the effectiveness of the Advisor/Advisee program as it currently functions. A few teachers report that the changes in the A/A program this year, which resulted in more frequent but much less extended time to meet with the A/A group, were not achieving the intended goals of the program.

> I think that some of us felt that it would, but I don't think it's giving those kids the one person. Supposedly...the advisor/advisee program is to give the kids one person they can identify with, you know, that they could come to, and I don't thing that it's doing that. I think you probably develop a relationship with students in your classroom...day to day – They're probably stronger than what we've developed in our advisor/advisee program...and I don't really know why it's worked out that way.

A few of the students offer an answer to that last question; they maintain that A/A is not worthwhile, due to the short time allotted to this program – "A/A is only five minutes, you can't do anything." Another teacher seems to agree with the students, suggesting that the change to daily contact was a step in the right direction, but not enough time has been allotted.

> Now this year we've gone to the daily contact where we meet with them every morning for about seven minutes, but that's lunch count, attendance, announcements, and then it's just dead time for about three or four minutes where you can visit, but it's not very long...and we've done no activities with

> the group, other than that, so I think we need a combination of the two...or more. You know, I just feel that we can do more with the program.

A final explanation for the perceived lack of success of the advisor/advisee is offered by a third teacher who talks about the time A/A might take from other classes if extended but touches on, perhaps, the real reason why teachers may not feel successful with the program – teachers need new and different skills to facilitate the Advisor/Advisee activities successfully.

> ...we really haven't done many activities...I suppose that [expanding the time for A/A] would be kind of a problem, you know. I guess you know the teachers don't want to give up their time, but yet, if we do have more time, which there should be for advisor/advisee,...most of the teachers want it to be some type of a structured thing. Some of them feel very uncomfortable in the role of advisors. They need some additional training as to what to do with that.

In summary, the A/A group appears to serve a managerial rather than advisory function *Skills for Adolescents* uses a traditional curriculum and instruction approach to life skills and health education. *The Learning Center* goes beyond minimal support services to target a specific population – potential drop-outs. Each of these programs supplements the traditional guidance counseling services provided at Jamestown. The advisory and support programs primarily reflect the practices of the traditional junior high with an attempt to move toward the middle school; this level is depicted in Figure 4.6.

Traditional Junior High	Emerging Middle School	Student-Centered Middle School

Figure 4.6. Extent to which advisory and support programs reflect the middle school concept at Jamestown Middle School.

Co-curricular programs

The co-curricular programs of the student-centered middle school offer all students the opportunity to experience participation in activities beyond the classroom. Ideally, these activities are non-competitive and every student has an equal opportunity to participate. Additionally, a wide variety of activities are offered in the student-centered middle school such that all students are able to find an activity which is interesting to them and at which they can be successful.

Co-curricular activities offered by Jamestown Middle School include interscholastic sports, instrumental and vocal music, Student Council, and Science Fair. Students also suggest the state math tournament, spelling bee, and read-a-million-minutes program as co-curricular opportunities for participation. "Lots of options" is an aspect of Jamestown Middle School that one sixth grader identified as important.

Sports are consistently and strongly supported by the students as a major part of their school experience. Many students identify sports as the best thing about their school; the athletic program is frequently named as one thing students would not want changed in their school; and many students see sports as the common bond for friendships within the school. While students see Jamestown as having a "good athletic program with a lot of good players", but they also see the sports program as an equity issue: "Everybody should be able to go out for football." "Girls can go out for wrestling." "They should intermix the sports." "Girls and boys on the same teams for sports." Sixth grade students also report feeling excluded from extracurricular sports, however, this is due to Iowa High School Athletic Association regulations, which do not allow extracurricular sports to begin until the seventh grade, rather than to a local school policy. However, there is no restriction on intramural sports for any grade level, but these are not offered at Jamestown.

Like sports, the student council is seen as an opportunity to participate for some students. Student council has representatives from each grade and is perceived by many

students as their decision making body. Student council has sponsored various activities including picking up litter and sponsoring a pizza sale for a fund raiser. Student council membership is by election, and some students question the election process, stating, "for student council people vote for the upper class, vote for their friends."

The music program, both instrumental and vocal music, provide students with co-curricular opportunities. Chorus and concert band are open to all interested students and rehearse during the school day. Membership in jazz band is by invitation and rehearsals are after school. The music program includes concert performances as well as competition through contests.

Other co-curricular activities which the students mention include dances, assemblies, pep rallies, programs, and yearbook. There are no clubs for students which address interests other than sports and music.

The co-curricular program of Jamestown Middle School focuses primarily on sports which involves 74% of the seventh and eighth grades and 52% of the sixth graders and music which involves approximately 72% of the students. Because these two programs are traditional to the junior high school, and because there is not a variety of clubs and activities provided to students outside of the classes, Jamestown Middle School is rated at the traditional junior high level on this component (see Figure 4.7).

Traditional Junior High	Emerging Middle School	Student-Centered Middle School

Figure 4.7. Extent to which the co-curricular programs of Jamestown Middle School reflect the student-centered middle school

Flexible schedule

Flexibility in the schedule of the middle school is essential to the effective implementation and institutionalization of the middle school concept. The schedule is designed in blocks of time over which the teams of teachers have control in determining the actual use of the time for instructional purposes. The teams determine the most appropriate division of time for each unit of instruction, and the schedule changes according to need.

The schedule of Jamestown Middle School is a traditional secondary school schedule with eight 40-minute class periods. Teachers are assigned instruction or supervision responsibilities seven of the eight periods and do not have control of or flexibility to change this schedule. This traditional time arrangement for the schedule used in 1993-1994 is reflected in the continuum in Figure 4.8.

Traditional Junior High	Emerging Middle School	Student-Centered Middle School

Figure 4.8. Extent to which the schedule of Jamestown Middle School reflects the student-centered middle school

Staff empowerment

The staff of the middle school must be empowered to make decisions effecting the operations of the school which means "giving teachers greater influence in the classroom, establishing building governance committees; and designating leaders for the teaching process" (Carnegie Council on Adolescent Development, 1989, p. 55). This includes empowerment of the administrative staff without interference from the central office as well as empowerment of the teachers to make decisions which are within their circle of influence.

The teachers at Jamestown Middle School express strong feelings of empowerment regarding the work each does in his or her classroom but feel much less empowerment over the building level operations. With the exception of some concerns over the tight focus of the district curriculum, most teachers feel that they are free to experiment and try new ideas in their classroom. As one teacher shared,

> He [the principal] encourages you to try different things...provided he is made aware of it. He's very big on...wanting to be made aware of everything that goes on, which is understandable, that's his job.

Another teacher expressed the same level of support,

> I think he does an excellent job in that respect...in fact, he's doing that right now. We're changing our point of emphasis in the curriculum and...he's given his support to that.

Involvement in the decision-making on a school-wide basis is not perceived with the same level of empowerment by teachers. Although most affirm that input for decisions is sought from them, they express that most decisions are made by the administration. For some this level of empowerment is appropriate, however many have concerns about the effective implementation of the middle school concept with this decision-making model. A concern stated by this teacher represents the concern express by others as well:

> [The principal] generally makes...most of the decisions, however...I think he's open to suggestions...and he occasionally solicits suggestions. I'm not sure how it's going to turn out in the end...my understanding of the other middle schools that have looked at is that the teaching staff has been given more leeway in terms of scheduling and that part of decision making than we are currently doing here, however, we're changing that, I hope.

With regard to the transition to the middle school concept, all of the teachers express awareness there is a plan to implement this concept and most were enthusiastic in their support of the idea. However, concern was expressed about some of the staff not wanting to change or, perhaps, be changed, as expressed by this teacher,

> The last year or so there's been a lot of negative ideas. I think if the staff, the entire staff, is part of the decision making, it'll be OK, but if it's done by committee, and then the committee presents...what we're going to do, then it

> won't work...Teachers are like farmers; they want to be independent. They don't want to be told what to do...but, I think if it's done right it will be OK.
>
> Now the [Glen Creek] teachers [at an in-service], I think, really shed the most positive light on this than we've ever had...Everyone, I don't care how big the staff is, everybody gets involved, so I think, if that's true and we do some things that fit our needs...I think it will...you know, be viewed in a positive light – going to the true middle school. There are some things that this staff, though I know will...they will probably...resist in that concept, but there's a lot of things that I think they will accept so I think it's just gotta be a total...total teacher involvement.

A staff which is empowered to make decisions regarding the students with whom they work is a critical component of the student-centered middle level school and perhaps, along with teaming and interdisciplinary curriculum, a primary indicator of the level of implementation of the middle school concept. The Jamestown staff have some empowerment over the decisions in their classroom, but there is no building level shared-decision making body, and there are no designated teacher leaders. At the present time, the Jamestown staff has little to limited empowerment as reflected in Figure 4.9.

Little staff empowerment Limited staff empowerment Total staff empowerment

Figure 4.9. Level of staff empowerment at Jamestown Middle School

Teacher and administrator influences

The level of teacher engagement and readiness and principal leadership are described as they are evidenced in the words and experiences of the students and staff, observed in classrooms, and reported in the surveys completed by the staff and students.

Teacher engagement

Teacher engagement is defined as the extent of the teacher's psychological investment in and effort toward teaching the knowledge, skills, and crafts he or she wishes students to master" (Louis & Smith, 1992). There are four types of teacher engagement; two which focus on human relationships: engagement with the school as a social unit and engagement with the students as whole, unique individuals; and two which focus on teaching and learning: engagement with academic achievement and engagement with the body of content knowledge. Each of these types of engagement was examined for evidence of the level of engagement of the teachers at Jamestown Middle School. The survey provides an indicator of overall engagement of staff.

Engagement with the school as a social unit reflects the amount of integration between personal life and work life and a sense of community and personal caring among the adults. Some Jamestown teachers report a high level of engagement with the school as a social unit, and others express a feeling of isolation. Despite this difference in their feeling about the school as a social unit, their description of the actual practice related to social engagement is fairly consistent. One staff member describes the isolation that many teachers feel when asked about opportunities to interact with other teachers,

> At lunch time, I suppose, your free period...But I don't interact too much with teachers...that's something, hopefully, that common planning time will really help. We'll really see that we have common problems and we can help solve each others problems. Right now I think we're isolated. I'm up here, the problems...are only my problems. I wonder what somebody else down the hall is doing, how come they don't have the problems that I have, and I know that they do have the problems only we just don't interact.

Others describe the exact same opportunities for interaction but view it as providing a lot of time to be together,

> We eat in two lunch shifts...so we always eat with half the co-workers probably...At our in-service meetings we have a good chance to visit with each other. We are always, we're expected to be out in the hall during passing, and so that's a good opportunity for us to interact with each other.

There is agreement among the teachers that social interaction outside of school is not common. There is a district Christmas party, which most staff members mention, but few attend. While they report their longevity as a staff has afforded them the opportunity to know each other well, the school is not the basis of their social life. A few report that the staff used to be very close and socialize frequently but suggest that the change may be due to their age and the accompanying change in lifestyle or the changes that took place when the school was reorganized to the 6-7-8 grade configuration.

While there is little engagement with each other socially outside of school and there is a feeling of isolation within the school, most teachers still express a bond as described by this teacher,

> I'd say we really care about each other...Once you get in this building you tend to stay...they kind of like it here once they get here.

Engagement with the students as whole, unique, individuals is demonstrated through teachers' availability to students needing support or assistance, listening to students' ideas, acknowledging and responding to students thoughts and knowledge, and involving themselves in students' personal as well as school lives. Students in all three grades report that "teachers are there to help if you have problems" and "teachers give good advice if you need help – school and other problems." There is a perception on the part of some students, however, that there are two types of teachers at Jamestown Middle School: "one just teaches and is no fun – the other knows what you're like, makes it fun, and teaches you more." Eighth graders are more likely than sixth or seventh graders to express that teachers are not engaged with them: "Teachers don't try to be your friend." "Teachers don't want to bond."

The principal when describing the staff agreed with the student perception of differences among the staff:

> They vary as far as their true interest in the child, and...I don't say this in a type of derogatory sense, but when I was placed in this position...all but two of the teachers had secondary training and I come from an elementary background. I guess, my desire is to see more the elementary...type of things teachers do,

> more caring, more child-centered...The one thing I guess is that they vary as really caring for kids. There are some there just because...not because they don't like teaching, they don't like children, but it's more a job than it is to truly care about their kids...and that's not the majority of them. I'd say the vast majority of them care for kids...but I think some of this comes from the fact that they are tenured, I don't want to call it burn out, but I've sometimes wondered...if they've been in it so long or they get days where their energies and enthusiasm are starting to drop.

Most teachers report that they try to be available to students who need help (25 out of 29) and that they try to show their students that they care about them (24 out of 29). However, influence of the minority of teachers that respond negatively to these items is strong as both the students and the principal state that there is a lack of caring among the teachers. One group of eighth grade students, when asked how their teachers show that they care about them, said flatly, "They don't."

Engagement with academic achievement is evidenced through curriculum writing and development, sharing ideas and experiences about teaching, making creative use of class time, expressing high expectations for performance, providing useful feedback to students, and actively considering how students are assessed. The teachers at Jamestown Middle School participate in the curriculum development that is directed by the district but generally do not feel that they have permission for flexibility or creativity in their curriculum. This teacher spoke for many when he said,

> We're pretty much set in to the curriculum that we're supposed to teach right now, so there really isn't supposed to be any fluctuation. We can't follow this...what the students actually need... unless we change the curriculum over time

The instruction in classes tends to be traditional lecture/discussion, worksheet and seat work oriented and does not reflect a high level of innovative use of class time such as cooperative learning, field trips, or experiential learning.

Feedback to students is provided primarily through grades on student work and comments, either written on students' work or spoken to students. Students report some of these comments to be negative: "Didn't work up to potential," "I'm disappointed in your

effort," "calls us deadbeats"; and some to be positive: "Great job," "Terrific", "call you to their desk to tell you they 'know you're smart, try harder'."

Teachers report that their expectations for students have been lowered through the years.

> Overall, I think this staff really tries to work, we've lowered our standards a lot, I know, since I started teaching and the gap is never near the end. They just lowered what they did...and a lot of times we spend way too much time and maybe...we'll swing back.

Engagement with the body of content knowledge is demonstrated through expressing personal passion for a subject, seeking ways to connect the subject to students' lives, being involved in professional organizations, and pursuing advanced degrees in one's field. The staff development in which teachers choose to participate indicates a moderate level of engagement with the body of content knowledge. Most teachers have participated in staff development such as graduate courses related to their content area, courses or workshops on instructional strategies, and inservices provided by the district. District staff development focused most recently on outcome-based education and the middle school. Only six of the teachers have completed advanced degrees.

Most teachers express an interest in their subject area and a desire that their students learn and enjoy the content being taught. They use current events and student interests to connect their lessons to the students' world.

Triangulation of the quantitative survey with the interviews and observations provides an overall picture of teacher engagement at Jamestown. The Teacher Engagement Survey provides an overall mean of the level of engagement. The frequency distributions on the ten items measuring teacher engagement provide further insight into the analysis of the four types of engagement in the survey data.

The teacher engagement survey supports the interview and observation data and indicates a moderate level of engagement by teachers at Jamestown Middle School (mean

overall engagement of 3.91 on a scale from 1 to 5). Individual item analysis indicates a willingness by most staff members to take extra measures to benefit the school and the students (22 out of 29). However, the commitment to Jamestown Middle School appears to be neutral as only eight teachers are in agreement with the statement "I wouldn't want to work in any other school."; five disagree with the statement, and 14 are neutral. The frequency distribution for the teacher engagement items is shown in Table 4.2; the frequency distribution for all 50 items in the Teacher Engagement Survey is in Appendix E.

A mean of 4.00 on an item indicates general agreement with the statement based on the scale used in the survey; a mean of 3.00 indicates uncertainty. With that in mind, Table 4.2 indicates that there is agreement among the Jamestown staff with only four of the items: the reputation and performance of the school is important (28 out of 29); teachers try to show students that they care (24 out of 29); teachers try to be accessible to students (25 out of 29); and teachers attempt to improve their courses (28 out of 29). With the exception of item 11 which was discussed above, the remainder of the items reflect moderate agreement; and no item indicates disagreement (or disengagement) among the staff.

Teacher engagement was disaggregated according to the demographic data available for the staff. The data were analyzed according to subject area, age, years of experience, level of education, gender, and amount of staff development related to at-risk students. No grouping of the staff by demographics showed any significant differences in level of engagement.

The teachers of Jamestown Middle School are not engaged with the school as a social unit. There appears to be little social interaction beyond what occurs naturally within the school day, and that interaction is inhibited by the school schedule. Engagement with the students as whole, unique individuals also appears to be moderate; although the teachers express engagement with the students, the students say that many of the teachers don't care. Engagement with academic achievement is moderate as observations of classrooms indicate mostly teacher-directed lecture/discussion, feedback to students is evaluative and encourages

Table 4.2. Teacher engagement item means, standard deviations, and numbers of disagree, uncertain, and agree for Jamestown Middle School

ITEM	Mean	S.D.	# Disagree	# Uncertain	# Agree
6. I frequently take on extra tasks or responsibilities that I think will benefit the school.	3.93	.84	2	5	22
11. I wouldn't want to work in any other school.	3.15	1.03	5	14	8
12. The reputation and performance of this school is important to me.	4.24	.79	1	0	28
14. I try very hard to show my students that I care about them.	4.21	.82	1	4	24
16. It's important for me to know something about my students' families.	3.69	.66	2	6	21
17. I try to make myself accessible to students even if it means meeting with them before or after school, during my prep or free period, etc.	4.03	.87	3	1	25
19. It is important that as teachers we try to insure that all students master basic skills and subject matter course work.	3.79	.86	3	5	21
20. I am always thinking about ways of improving my courses.	4.38	.56	0	1	28
23. Interdisciplinary classes benefit teachers as well as students.	3.70	.87	3	6	18
24. Given the opportunity, I would take additional college or university courses in the subject area I teach most often.	3.90	.72	1	6	22

n = 29

performance but does not appear to include specific and useful feedback, and teachers confess to a lowering of standards regarding performance levels. Engagement with the body of content knowledge is higher as teachers take advantage of staff development opportunities and seem enthusiastic about their subject area. The level of engagement of the teachers for each type of

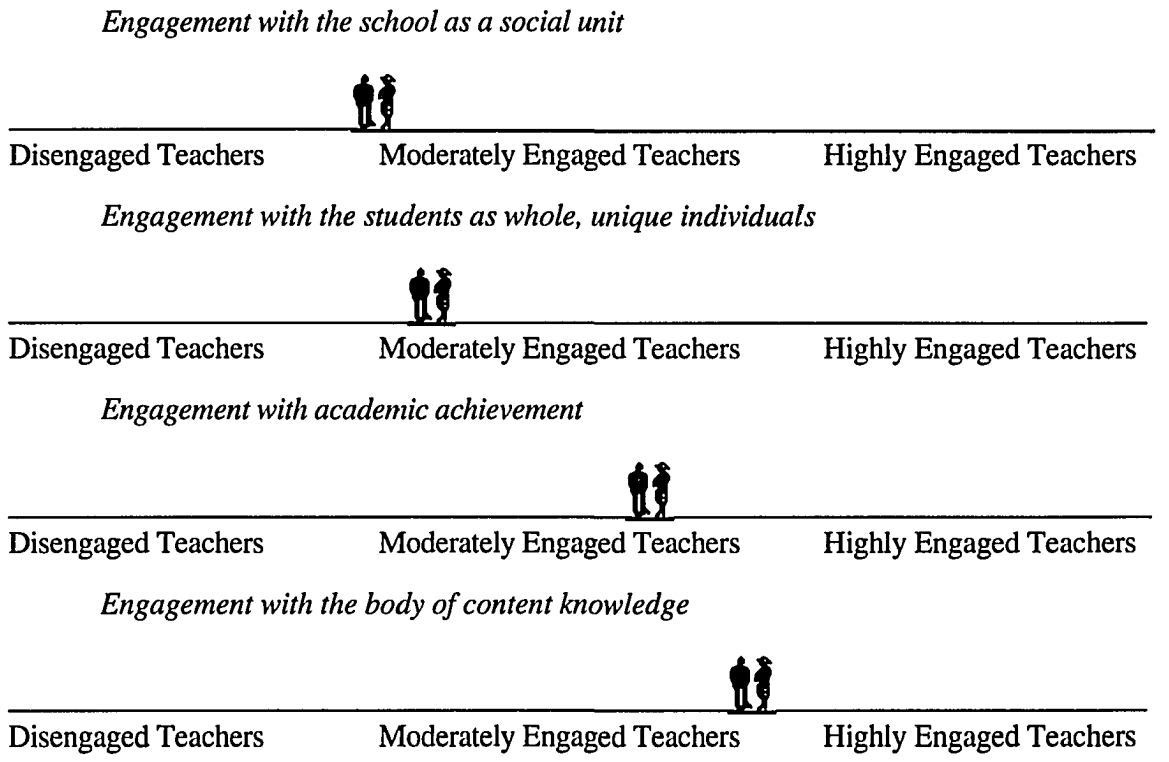


Figure 4.10. Levels of four types of engagement of teachers at Jamestown Middle School

engagement is based on the data which is described in the preceding discussion and depicted on the continua in Figure 4.10.

Teacher readiness

Teacher readiness to meet the needs of all students is reflected by teachers who have the capacity (preparedness and problem acceptance), will (responsibility acceptance, willingness to change, and student potential orientation), and self-efficacy (belief that they can make a difference and perform successfully). The evidence of readiness at Jamestown Middle School is found in the responses of teachers, students, and principals and is supported by the survey data.

The teachers, when asked how they know if they are making a difference, reply "I *hope* that I am." Most then go on to cite evidence such as parents tell them they appreciate what they are doing or a former student returns to tell them what impact they have had. Special educators and at-risk teachers/tutors appear to have a higher sense of self-efficacy as they were able to tell of students that they had observed being successful in the general education classroom or at the high school after receiving assistance at the middle school. Despite discouragement over the lack of effort they believe students expend, teachers speak positively about the potential of most of the students although it is qualified.

> It's an attitude...towards school. It's a hard thing to...some of these students just have a bad attitude. If they were...they had a good attitude they could be successful with a little hard work.

The teacher readiness survey provides a quantitative measure of the level of readiness to meet the needs of all students among the staff of Jamestown Middle School. The overall readiness level is moderate with a mean of 3.56 on a rising scale of 1 to 5. The factors of readiness were reported separately and compared to the state data on rural secondary schools (see Table 4.3). It was hypothesized (based on the previous study) that Jamestown teachers would exhibit a higher degree of readiness than the other rural secondary schools; however, this was the case only with "student potential orientation," defined as belief in the ability of students to learn and excel. Two other factors, willingness to change and efficacy, as well as overall readiness appear to be lower for Jamestown teachers than other rural secondary teachers in the state. The frequency distribution for each item on the Readiness Survey which identifies the mean, standard deviation, and number in agreement, neutral, and disagreement can be found in Appendix E.

Jamestown teachers appear to have a moderate capacity for meeting the needs of students, they accept that there is a problem with students at risk as they speak of the changes

Table 4.3. Readiness factor means for Jamestown Middle School and probability-values for mean difference when compared to state data

Readiness Factor/Subscale	Jamestown Mean	State Mean	Probability Value
Capacity	3.65	3.65	.50
Preparedness	3.32	3.43	.84
Problem Acceptance	3.98	4.15	.86
Will	3.74	3.83	.89
Responsibility Acceptance	3.79	3.94	.89
Willingness to Change	3.96	4.23	.0001**
Student Potential Orientation	3.45	3.21	.02*
Efficacy	3.27	3.71	.005**
Overall Readiness	3.56	3.73	.03*

* Statistically significant
** Highly statistically significant
n = 28

in family structure and in the students with whom they work. They do not seem to feel well prepared to work with these students and seem at a loss to suggest solutions. Their will to meet the needs of students may also be influenced by their perception that the family and society are to blame for the students lack of success in school. While they apparently believe students are capable of achieving, they do not indicate a willingness to change their practice to ensure that students do achieve. This willingness to change may well be influenced by their moderate to low sense of self-efficacy. Their overall readiness to meet the needs of all students is moderate. The level of readiness and of the factors of readiness for the Jamestown teachers are indicated in Figure 4.11.

Principal leadership

The leadership of the principal has a strong influence on the engagement of teachers in the educational process. The following five principal leadership behaviors demonstrate engagement of the principal and promote engagement by teachers: buffering teachers from outside interventions, visibility and availability in the daily routine, delegating and empowering

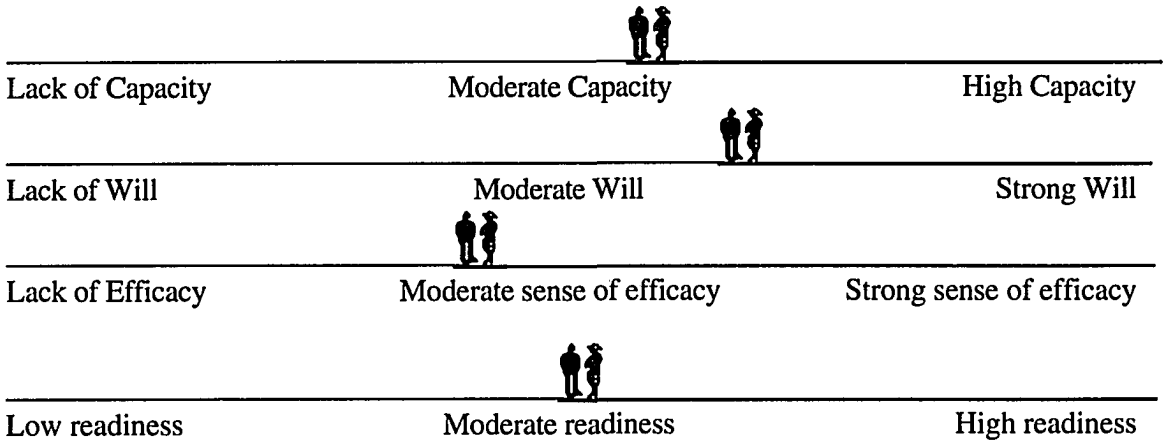


Figure 4.11. The level capacity, will, efficacy and readiness for the Jamestown Middle School staff

the professional capabilities of the teachers, confronting disengaged teachers, and developing and modeling a vision and values for the school.

The principal of Jamestown Middle School provides the teachers with "excellent support." Teachers report that they are able to try new ideas "as long as we keep him informed." Most teachers affirm that they are able to talk with him when they have concerns, that he is available when they seek him out. He also is visible in the classrooms beyond the minimal supervision requirements.

> He likes to stay in touch with the kids and what's going on in our rooms, you know, which makes us feel good...also, I think because he's willing to put forth a little effort to help us do what we need to do...He walks around a lot and he will walk in, walk through the room, look at the bulletin boards, you know sometimes he'll come in and sit down maybe five minutes and get up and leave...just come in and then he does come in a do his forty-two minute class observation, but other times he just walks around looks at students' work, talks to them while they're working.

The leadership style of the principal at Jamestown is more directive than delegating and empowering. Many teachers share that they do not feel that they have a lot of meaningful input into the decision making process.

> They put us in committees and stuff, but it usually ends up getting...it's like the committees we set up for the students, we know what we want them to do and we can kind of guide them into it. I was going through the same things; we get to plan in these committees and we got to get guided into what they want us to do...to the right conclusion.

The expectations for teacher behavior and engagement come from the principal and teachers agree that those expectations are clear. "He stands behind you...if you're right he stands behind, if you're wrong he tells you." The supervision process is the primary means through which teachers get feedback on their performance, although he provides informal feedback through conversation and notes also.

> [The principal] has a pretty good handle on everything, and he pretty much tells us what's expected of us, and...he's pretty fair...you know where he's going to stand all the time. He doesn't surprise you.

The vision for the school and ideas for change also come through the leadership of the principal. Many of the staff members acknowledge that the idea to move to the middle school concept is a vision of the principal. He, too, recognizes this role in school improvement.

> I guess I plant the seeds...I'll pick it up somewhere at a meeting or something; I'll bring it to the staff, what do you think about this...Yeah, it looks good, let's work on it. But also, you know, there are other situations where out of our building meetings staff members say, 'Hey, what about this? I have this concern, or could we talk about this?' so it works both ways...but a lot of seed planting has to be done too.

The principal clearly articulates a long range plan and vision for the school which includes the middle school concept, student-centered practices, and a caring environment for students. The principal consistently and repeatedly emphasizes his concern that the staff of his school be engaged and student-centered.

The level of principal leadership is represented for the five engagement behaviors in Figure 4.12. The principal demonstrates consistent involvement with protecting and

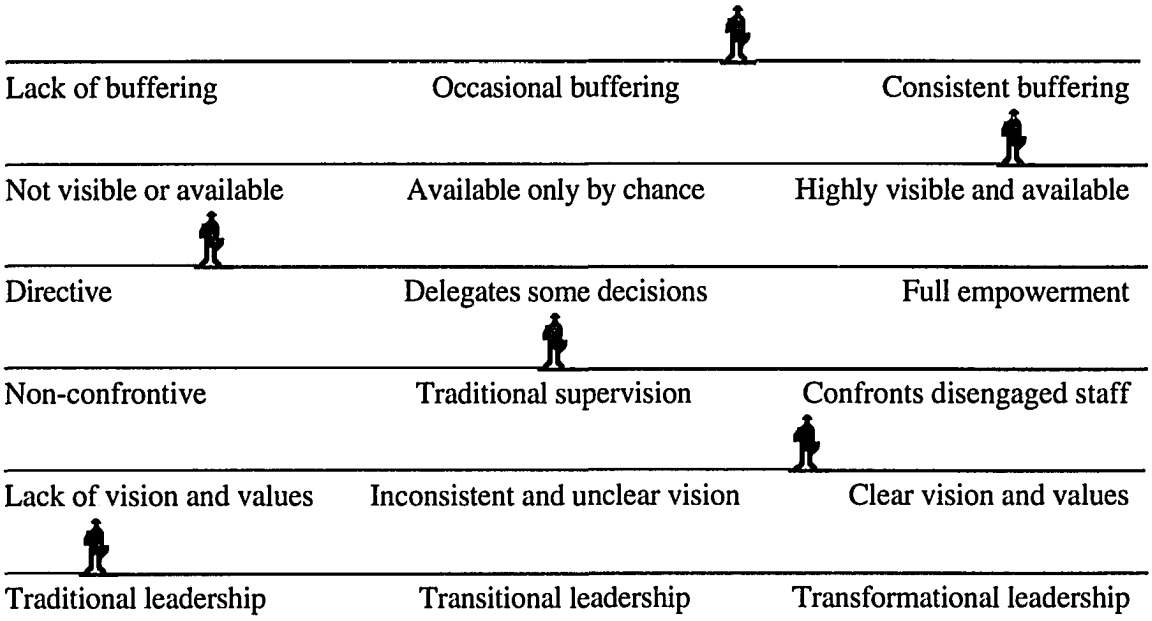


Figure 4.12. Leadership style of the principal at Jamestown Middle School.

supporting teachers in their role as educators. He is highly visible both in formal and informal situations within the school. His leadership style is more directive and decisions for the school are perceived to be made by him with some staff input rather than by the staff or students. Although it is difficult to know, it does not appear that the principal confronts disengaged teachers. The expectations for teachers are perceived, however, to come clearly from the principal. His leadership through vision and values are also clearly defined and communicated to the staff, the only concern expressed by some teachers is that the vision may not be shared and, in fact, is likely to be resisted if it appears to be a "top down sort of thing."

Student engagement

Student engagement is the student's investment in and effort toward learning; it is evidenced by participation in academic work, intensity of student concentration, enthusiasm and interest expressed, and degree of care shown in completing work. Student engagement is

influenced by three factors: a student's underlying need for competence, which is assumed in this research to be a basic need of all students and, therefore, not measured by this study. Membership in the school is evidenced by clarity of purpose, sense of fairness, personal support, success, and caring. Authentic work is evidenced by extrinsic rewards, intrinsic interests, sense of ownership, connection to the "real world", and fun. Student Engagement in this study was measured only through the quantitative Student Engagement Survey which was administered to all students.

The Student Engagement Survey supports the level of student engagement and the perceived effect of the factors of student engagement by the students. A mean of 4.00 or above indicates student engagement; a mean of 3.00 is uncertain; and a mean below 3.00 indicates disengagement of students. The mean scores for overall engagement and the engagement factors are listed in Table 4.4.

Table 4.4 Means of student engagement factors for Jamestown Middle School.

Engagement Factor/Subscale	Jamestown Mean
Engagement	3.88
Factors which influence engagement	
Authentic Work	3.27
Ownership	2.37
Membership	3.40
Future Orientation	3.66
Peer Support and Esprit	2.87
Efficacy	4.35

n = 260

The survey indicates the students of Jamestown Middle School are engaged in their school work. The mean for engagement is 3.88; however, the frequency distribution provides further insight into the student engagement level as 75% (47% agree and 28% strongly agree) of the students report engagement, 20% are uncertain, and only 5% appear disengaged.

Disaggregation of the student engagement data offers further insight into the influences on engagement in the school. There are no statistical differences on student engagement between boys and girls; between grade levels; between special education, talented and gifted, and general education students; between participants and non-participants in sports; or between participants and non-participants in music. There are differences between each level of grades earned with the level diminishing as the grades lowered (see Table 4.5.) validating that students who earn higher grades are more engaged than those who earn lower grades. The mean differences between each grades-earned group were all significant at $p < .01$.

Table 4.5. Means and frequencies for student engagement by grades earned at Jamestown Middle School

Grades Earned	Frequency Count	Mean
Mostly A's and B's	136	4.05
Mostly B's and C's	80	3.85
Mostly C's and D's	30	3.51
Mostly D's and F's	10	2.82

n = 256

There was a significant relationship between socio-economic status (as defined by those eligible for the free-and-reduced lunch program) and engagement. The student engagement mean of the lower ES group was 3.75; while the mean for the higher ES group was 3.93. The probability value for this difference is .04.

Factors that influence student engagement

The factors that influence student engagement are school membership which is the extent to which there is caring, support, fairness, success, and clarity of purpose; and authentic work which is comprised of extrinsic rewards, intrinsic interest, connection to the "real

world", ownership, and fun. These factors were examined through the student interviews and observations as well as the responses on the Student Engagement survey.

Through the survey, students indicate a strong sense of efficacy but suggest a lack of ownership. The interviews with students support the results of the survey as students report that the "school board", "Superintendent", "Principal", and "teachers" make the decisions and make the rules for the school. There are exceptions to this which the students share: that "in SFA [Skills for Adolescents] the kids made up the rules", that "the lunchroom rules were made up by the seventh grade and the consequences", and that in "some classes you get to make up the rules that everyone will agree on, if you break them, you have consequences to pay for it." Even the Student Council, although seen as a decision making body, is perceived to have limited power: "minor ones [decisions] are made by student council" "don't get to make too many decisions, but more than if not on Student Council." Both the identification of the adults as the decision-makers and the fact that they cite these other examples as exceptions indicate a lack of ownership by the students.

Extrinsic rewards are provided to students in a variety of ways. The most common reward noted by students is "grades", and they consistently report that grades, progress reports, and report cards are their gauge on their performance. Beyond grades, however, students offer a number of examples of extrinsic rewards: "candy for being good," "free pass to library or bathroom," "candy and sometimes pencils for doing well on tests," " all 'A's' we get pizza," "awards for special things like the Honor Roll or perfect attendance," "caught doing a good deed cards," and "pat on the back."

Intrinsic interests of the students are also a factor in authentic work and student engagement. The frequency distribution of the student engagement survey indicates that students are neutral with regard to how the school satisfies their interests. Only 29% agree that what they are learning is interesting while 47% are neutral, and 24% disagree (see Table E.1 in Appendix E.) When interviewed, students do not spontaneously talk about their learning as

interesting, although when specifically asked, students indicate that "hands on" activities and "field trips" are interesting. Eighth grade students also report that "making presentations" to their class was interesting and that they learned more from doing that.

Students do see some connection between what they are learning and the real world, although this is expressed in generic terms: "Education is important." "What we learn is important." "Helps [you] prepare for high school." One group of students, however, shared the perception that what they were learning was "stuff we don't need." The survey responses indicate a majority of the students see the relevance between their middle school learning and their future as more than half of the students agree that "What I am learning is school is important to me," "Things that I learn in school are useful to me now," and "I believe this school prepares students to be successful in the future" (See Table E.1 in Appendix E.)

School membership is posited to influence student engagement. Clarity of purpose, fairness, personal support, success, and caring are the elements that comprise membership. On the student engagement survey, students report a weak sense of membership (Mean=3.40). The frequency distribution of items related to membership provides more insight into why it is weak.

First, students report a relatively low sense of fairness as only 36% report that teachers treat students fairly while 49% report the principal treats students fairly. When asked about the rules of the school, students report that the "rules are reasonable", although some are "a little strict" and others suggest that "some are kind of dumb, like first grader rules" and that some rules are unnecessary "we know we have to do it, but they put it up anyway." Generally, students feel that the rules are enforced equally for all students, however, some concern is expressed that "kids who don't usually get in trouble get worse punishments because it's not expected" and that "one person gets in trouble and they punish everybody."

"Friends" are mentioned by most students as a very important aspect of their school experience from "doing sports with friends" to "talking with friends in class" to "sitting with

friends in lunch even with the seating chart so it's OK." Friends are clearly a major factor in the students' perception of the school. There is a distinction between friends and peers, however, as students report that there are "cliques" and that you "fit in with a certain crowd." "If you're not in their group, you can't be friends" was one indication of how students treat each other and "some don't fit into any group."

Peers are considered to be the entire student population, including those in other "groups", and students indicate that groups do not always treat each other with respect. "Bullying is a big deal" and students give examples of bullying. Sixth graders report being bullied by eighth graders: "Get your locker slammed for a joke by older kids–mostly eighth graders." "Get made fun of." "Get pushed around by eighth graders." Seventh graders tend to talk in more general terms: "Call each other names." "Gangs don't care about other people." "Get teased to sort of have fun, not to be mean." Eighth graders tell mainly of "making fun" of other students: "Everybody makes fun of the dweebs – nerds." "Friends make fun of other people." "Different groups don't get along too well usually."

Caring is an element of school membership and student engagement, and caring and support are factors in promoting resiliency. Only 42% of the students agree that "my teachers care about me" and this is evident in the interviews with students also. One group of eighth graders, when asked how they know their teachers care about them, responded with, "They don't." and another group of seventh graders said they "have no idea." However, most students were able to identify teacher behaviors which indicated caring including: "help if you need help," "tell you," "give homework so you'll learn," "concerned about your work," "have a study group after school," "talk to us in the halls," or "[Teachers] are there to help you, not only for school work but for other things."

The profile of student engagement and of the factors which influence student engagement is shown in Figure 4.13.

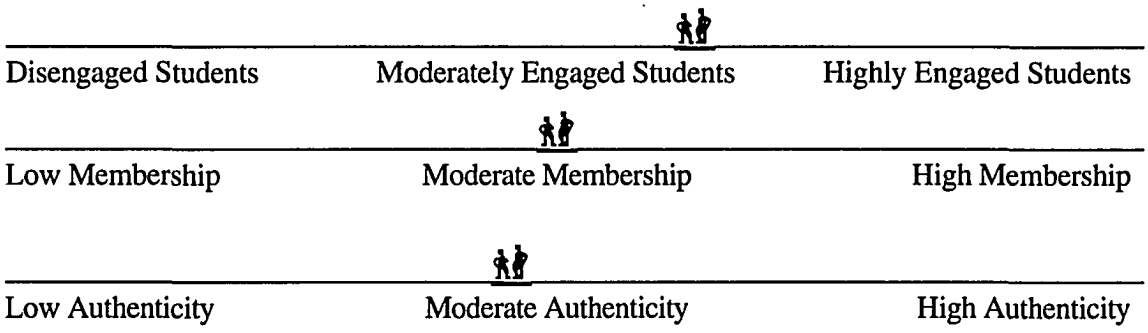


Figure 4.13. Level of student engagement and factors which influence student engagement for Jamestown Middle School.

Protective factors that promote resiliency

The protective factors that promote resiliency in students are caring and support, high and clear expectations, opportunities for meaningful participation, and skill building. The level and how these factors are demonstrated is derived from the interviews, observations, and artifacts from Jamestown Middle School.

Caring and support do influence student engagement. The evidence indicates that students do not experience a pervasive sense of caring and support from either the adults or their peers in the school. Although some students do give examples of behaviors that show caring, a large portion of the students do not feel that caring even if it does exist. Only 27% of the students indicate that teachers listen to students. One student summed up the ideas of many when he said, "This is not a kid school, this is a teacher school."

Clear and high expectations are related to the rules and guidelines of the school and to the sense of fairness discussed above as an element of membership which influences student engagement. Students learn what is expected of them through the rules which are included in the student handbook and shared with the students at the beginning of the school year.

Additionally, classroom behavioral expectations are related to students through being posted on the walls as well as through teachers telling the students what the classroom expectations are.

Academic expectations are communicated to students by the teachers and are incorporated in the initial assignments as they are made. Feedback provided to students regarding their performance on their class work also has the potential to communicate expectations. However, in order for this to be effective, the feedback must be specific to the work. Comments on student work tends to be less specific and more evaluative such as "Good job," "Great," "Did you study," or "I'm disappointed in your effort." Teachers also report that they feel they have lowered their expectations for student performance since the beginning of their teacher career.

Opportunities for meaningful participation, by definition, requires that students feel that what they are doing is important and makes a difference for others. In that sense it is related to efficacy which has already been discussed. Additionally, opportunities to be a part of activities and events at the school can fill the role for this factor. Students report that one of the things that makes sports important to them is that they "get to go away and represent the town and school with [their] friends." Even paying a fine for forgetting something can become meaningful as students report "you pay money if you forget your book, but it goes to a good cause (the Christmas fund.)"

The Student Council activities (litter pick up and pizza sale fund raiser) also allow those students to contribute and participate in meaningful ways, although these activities are presented to them rather than allowing them to create their own contribution. Concern is expressed by both students and teachers regarding the actual authority of the student council. Students share that student council makes "only minor ones [decisions]" and that "you [student council representatives] don't get to make too many decisions, but more than if not on student council." One student stated that "the authority of the student council needs to change" and a few teachers express the same sentiment as this one.

> If they're [students] going to be empowered, let's not say they are empowered unless we do empower them. Let's give the student council some authority and let's not just be a rubber stamp...

While there are opportunities to make a contribution and some students perceive these as important to others, these opportunities are not available to all students in the school and, perhaps, are least available to those students who need them the most, the at-risk students.

Skill building is inherent in the school experience; however, in order for the skill building to act as a protective factor for resiliency, the skills must be connected to the real world of the student. These skills also go beyond academic skills to include those same skills which are referenced as a part of the core of common knowledge in the middle school concept, specifically complex thinking, healthy lifestyle choices, active citizenship, integrated content knowledge, and learning skills. This factor is also a component of authentic work and influences student engagement.

At Jamestown Middle School the *Skills for Adolescents* curriculum is taught to all sixth and seventh grade students. This curriculum provides opportunities for students to gain skill in making healthy lifestyle choices, and the social studies teachers report that citizenship is a part of their curriculum. Direct instruction in complex thinking skills and integrated content does not appear to be a common component of the educational program. Additionally, the opportunities to apply these skills require situations in which students are empowered to make decisions and implement their own choices, and the staff and students at Jamestown indicate opportunities of this type are limited.

The profile of the protective factors that promote resiliency for Jamestown Middle School is presented in Figure 4.14. Moderate care and support, few opportunities for meaningful involvement which are available to all students, relatively high and clear expectations, and skill building which is strong for academic skills but less strong for holistic life-coping skills are reflected in this profile.

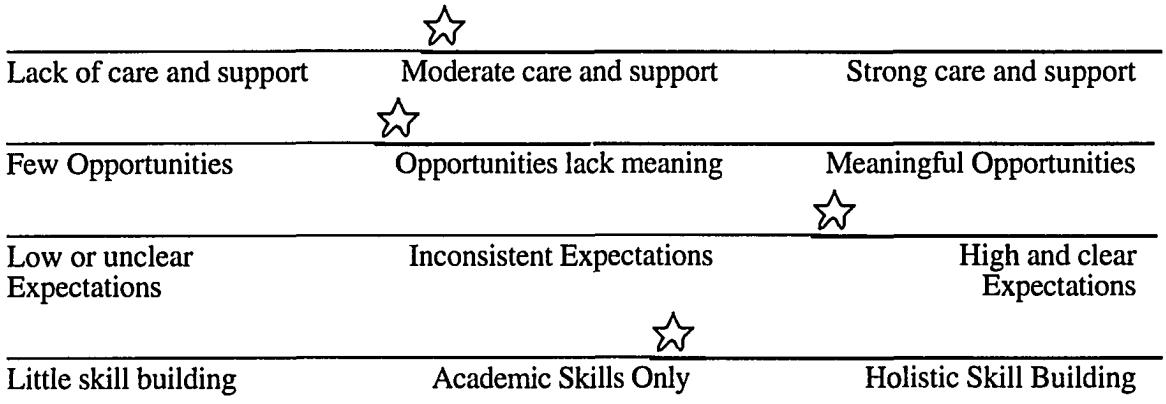


Figure 4.14. Levels of the protective factors that promote resiliency for Jamestown Middle School.

In summary, the Jamestown Middle School, at the present time, functions more as a traditional junior high than a middle school with regard to curriculum, instruction, and assessment; learning teams of teachers and students; a core of common knowledge; co-curricular programs; and a flexible schedule. Some transition has been made on exploratory programs and advisory and support programs, and these components are emerging. The staff demonstrates awareness of the developmental characteristics of the early adolescent but has not yet applied that knowledge in a comprehensive manner. The staff has not been empowered to make the decisions regarding the practices of the middle school outside the classroom.

Teachers are moderately engaged with the school as a social unit within the school day and have maintained a separation of the personal from the professional. Teachers are engaged with the students academically but are less concerned about the whole child; caring and support have not been communicated to the entire student population in a pervasive manner. Teachers are engaged with academic achievement and with the body of content knowledge.

The principal demonstrates leadership by supporting and buffering teachers from outside intervention; he is highly visible and available to staff and students. His expectations for teachers are clear, and he has a clear vision for the school. At times his directive leadership style results in those expectations and the vision appearing to be mandated, and teachers and students do not feel empowered on their own behalf.

Students overall are moderately engaged in the educational process, although low ES students (at-risk students) are significantly less engaged. Students do not indicate a sense of ownership regarding their school or their school work, which is closely related to the empowerment issue. Students do report strong engagement with their friends.

While the protective factors that promote resiliency are present to some degree at Jamestown Middle School, none of the four factors is particularly strong. The caring and supportive environment is not felt by all students. Although academic expectations are communicated to the students, by their own admission, the teachers have lowered these expectations. Behavioral expectations have been communicated and appear to be followed with relatively few exceptions; the students behave within the rules. Opportunities for meaningful participation or to make a contribution are available to some students, but not to all. Additionally, the opportunities to participate do not always allow the student to be empowered to make decisions and to feel that the contribution they are making is important. Finally, skill building is focused on academic and learning skills; less emphasis is placed on interpersonal, healthy lifestyle, and critical thinking skills.

Morristown Middle School

Morristown Middle School is the only middle level school in the school district and serves approximately 575 students in grades 4 through 8. A survey conducted by the Chamber of Commerce in the community found that 15.4% of the families with children under age 18 live below the poverty level. A school survey revealed that 58.8% of the children in the district

are latch-key children. The district has three elementary schools, one middle school, and one high school. The district is approximately 200 miles from any major metropolitan area with limited access to cultural and educational opportunities, although, there is a two-year college in the community.

Special programming within the school includes a Student-At-Risk program which incorporates a variety of strategies to meet the needs of at-risk students: cross-age tutoring; two-year college tutors; Mentor/Mentee program; extended learning; Student Assistance Program; Advisor/Advisee (Homebase) program; Peer Support Club; Multi-cultural Enhancement Program; Work experience for special needs; Vulture Culture, an anti-bullying program; and assignment book program. Other programming for special needs include Chapter I; special education, including resource room, special class with integration, and self-contained classroom; QUEST curriculum; Challenge, a program for talented and gifted; DARE, substance abuse program; developmental guidance; English as a Second Language; and a Citizenship program.

The student population of Morristown Middle School is primarily White-non-Hispanic (95%) with Hispanic being the largest minority (4%) and Asian/Pacific Islander and African-American the remaining ethnic groups. Approximately 38% of the student population are eligible for the free-and-reduced lunch program. Iowa Tests of Basic Skills are used to measure student achievement, and the grade level results provide a general achievement profile for the school. When compared to the national norms, all three grades of students at Morristown score higher than the national average on all test batteries. Results of the Fall, 1993, testing are shown in Table 4.6.

The staff of Morristown Middle School is a diverse staff with a range of experience from first year professionals to those with over 20 years experience. The education level of the instructional staff ranges from Bachelor's degree to those with a Masters degree plus hours beyond. There are 54 full or part-time instructional staff members listed in the 1993-1994 staff

Table 4.6. Percentile Rank of the Average Standard Score on National School Norms for the Iowa Tests of Basic Skills by grade level for Fall, 1993, Morristown Middle School.

Test Battery	6th Grade	7th Grade	8th Grade
Vocabulary	54	56	58
Reading	62	65	59
Language Skills	71	74	67
Work-Study Skills	66	68	65
Mathematics Concepts	72	71	62
Mathematics Problems	67	69	58
Social Studies	63	67	66
Science	63	69	62

n = 372

roster: 43 female and 11 male instructors. All staff members are white. The principal of Morristown Middle School is male and has been principal at Morristown for seven years. These is also a female associate principal who is in her third year at Morristown.

Staff development is provided through the district for all district staff. Topics in recent years include TESA (Teacher Expectations-Student Achievement), assessment strategies, cooperative learning, and, during this school year, site-base decision making. Individual building staff development for the middle school has resulted in staff training in conflict resolution, the middle school concept, and strategies for teaming.

Morristown Middle School has been studying and implementing practices and policies of the student-centered middle school concept since 1988. The transition from junior high to middle school is being accomplished through an action research model which began with research into the effective middle school literature, visits to exemplary middle schools, and staff development workshops and seminars. This study process resulted in a commitment on the part of the staff to create "a positive school climate with a variety of teaching methods, where teachers worked in teams and students became a part of a cooperative learning

community. Interdisciplinary instruction would replace subject-area specialists, and students would explore a sense of belonging." One positive result of this work was that, in the 1992-1993 school year, Morristown Middle School was recognized at the state level as "exemplary in preparing Iowa's youth to live and work successfully...outstanding in improving student growth and achievement."

Although the school building houses grades 4 through 8, the school has been structured such that the fourth and fifth grades function with an elementary model independent of the sixth, seventh, and eighth grades. Until the 1993-1994 school year, the sixth grade also functioned independent of the 7th and 8th and utilized a team approach with students spending 60% of the school day with the homeroom teacher. In 1993-1994, the instructional structure of the 7th and 8th grades was changed to a team approach which is explained in the section of this report about learning teams. Due to the differences in the structure between grades 4-5 and grades 6-8, and because the focus of this study was on the 6-8 middle level school, the remainder of this case study report applies primarily to grades 6, 7, and 8.

Structures of the student-centered middle level school

The description of the programs, practices, and policies of the student-centered middle level school at Morristown Middle School is based on the interviews with teachers, principal, and students as well as the observations and artifacts. At the conclusion of the discussion of each of the nine components of the student-centered middle level school, the current practices related to each will be placed on a continuum which indicates where the school is in its transition from traditional junior high practices to the student-centered middle school concept.

Staff knowledge of early adolescents

The literature on the middle school repeatedly emphasizes the need for staff in middle schools who are well prepared and knowledgeable about the developmental characteristics of the early adolescent. This knowledge is evidenced both in the pre-service preparation of

teachers as well as in the staff development opportunities afforded to the teachers and is demonstrated in practice.

As reported above, the staff studied the middle school literature in preparation for the transition from junior high to middle school. This literature (as can be noted in Chapter 2 of this dissertation) is rife with information on the developmental characteristics of early adolescents. Teachers do not, however, report any staff development which focused specifically on the middle level student. During the study process prior to the implementation of any of the middle school practices, the staff studied Turning Points: Preparing American Youth for the 21st Century (1989) which includes some discussion of the developmental characteristics of the early adolescent. Additionally, many of the teachers have elementary preparation and training, and the hiring practices of the administration actively seek teachers with an elementary background.

The awareness of the developmental characteristics of the early adolescent is evident in the staff's discussion of the behavior of their students as they refer to "normal" and "typical" middle school kids. The application of this knowledge is evident in the use of instructional strategies which change activities frequently and allow students to move and refocus. Additionally, the commitment of the staff to the implementation of the components of the middle school indicates their application of the knowledge. This level of awareness and application is shown in Figure 4.15.

Little knowledge — Awareness knowledge — Applied knowledge

Figure 4.15. Level of staff knowledge of the developmental characteristics of early adolescents at Morristown Middle School

Core of common knowledge

The core of common knowledge is defined in the Carnegie Report, Turning Points, as curricula and instruction programs which teach basic academic skills, critical thinking, healthful lifestyles, and active citizenship through integrating curriculum across disciplines and emphasis on learning as well as testing.

The curriculum of Morristown Middle School includes the traditional subject areas within the core academic and the exploratory classes. Basic academic skills are incorporated into the everyday instruction of these classes. Those students who experience difficulty due to deficiencies in basic skills are remediated through Chapter One, special education, or tutoring through the at-risk program.

Higher order thinking skills (HOTS) is a part of the advisor/advisee (Homebase) curriculum. Weekly current events and Whittle Communications Channel One are used to promote a global citizenship perspective. QUEST and health classes promote the development of healthy lifestyles. Integration of the curriculum takes place within the core classes as teachers incorporate interdisciplinary strategies within the two subject areas in the core block. Additionally, integrated curriculum results from the interdisciplinary-thematic units which are incorporated into the curriculum throughout the school year. As one teacher described the purpose of the school, she summed up the philosophy of the core of common knowledge:

> There's more to school than just getting your work done and getting the assignments in, but they need to learn to be good citizens too. They need to learn how to be, you know, how to act so when they're out there they can be successful.

With the incorporation of basic academic skills, critical thinking, healthy lifestyle choices, and active citizenship into the total curriculum of the school, the level of implementation of the core of common knowledge is emerging toward the student-centered middle school concept (see Figure 4.16.)

Traditional Junior High	Emerging Middle School	Student-Centered Middle School

Figure 4.16. Extent to which the core of common knowledge of Morristown Middle School reflects the student-centered middle school

Developmentally appropriate curriculum, instruction, and assessment

Developmentally appropriate curriculum, instruction, and assessment for the middle level student is defined by the literature as curriculum which is connected to the "real world" of the student and uses an interdisciplinary approach to enable students to make connections to their prior learning. Developmentally appropriate instruction is an experiential-active learning process and utilizes instructional strategies which require the student to become involved in the learning process, such as cooperative learning, inquiry-based instruction, and constructivist learning. Assessment needs to be appropriate to the knowledge and skills being measured and should provide the student with immediate feedback on his or her performance.

The curriculum of Morristown Middle School is organized into core academic classes, exploratories, and the advisor/advisee program. The core curriculum is taught by the homeroom/core teachers and includes reading and language arts, which uses a whole language approach; mathematics; science; health; and social studies. The social studies curriculum includes contemporary issues and geography for seventh grade and American History for eighth grade. The core academic classes meet daily within the core block of time, and each core teacher teaches two subject areas during the core period. The exploratories include computer education, music, home economics, industrial technology, art, and physical education.

Use of interdisciplinary approaches is encouraged in the core academic classes. With the team approach and block scheduling being new to the 7th and 8th grades in this school year, these teams are beginning to approach the curriculum from an interdisciplinary framework both within the individual core periods as well as across grade levels. The sixth grade uses integrated units which are developed by the students and the teachers. Each month a theme is chosen and instructional activities are planned which incorporate "hands-on, higher-level creative and critical thinking, and problem-solving strategies." The teachers act as facilitators and provide a "classroom climate rich in inquiry, investigation, and problem-solving." During the time of the research team's second site visit an interdisciplinary unit on the Rainforest was being implemented in the sixth grade. The enthusiasm of the teachers and students was contagious, and the entire school was drawn into the study and resulting activities.

The teachers at Morristown Middle School have received training in cooperative learning and are encouraged to use those techniques in their instruction. The use of these techniques is reflected in the arrangement of the classrooms. All the classrooms observed were arranged either into two sets of rows of desks facing each other or into groups of four desks arranged in a circle. It is not uncommon for the desks to be rearranged two or three times during an 80-minute core class in order to accommodate the instructional strategy being used for various learning activities. Students also tend to be moving around during the instructional time as they move from activity to activity or group to group. At times students work alone; other times in dyads, triads, or quads; still other times the focus is on the whole class; all within one 80-minute block.

Seventh and eighth grade students indicate mixed reviews about the 80-minute class blocks which are new to them in the 1993-1994 school year. Some report "boring classes are too long–80 minutes" while others claim that "80-minute classes are the best." The difference appears to be the instructional strategies being used in the classes. Those classes which utilize

more traditional lecture/discussion methods seem long to the students who say they are "boring...you stand up maybe two minutes" and the "lectures last forever." On the other hand, those classes which use a more interactive and experiential approach to instruction are described by the students as having "neat projects, group work, labs are fun" and "games in class are fun." The variety, both within the rotation of the core blocks and within the class activities, is reflected by one student who, when asked to describe a typical day in school, exclaimed, "There isn't a typical day!"

Students describe the work that they do to learn as also including a variety of tasks. Some of the "assignments" include "experiments," "reading," "projects in class," "study guides and write answers from the book," "take notes," and "notes on the board to copy." Homework is an issue for sixth graders who frequently express a perception that they get a lot of homework. More than one sixth grader expressed ideas similar to this one,

> If you're in any after school activity, you do that, then you go home and you don't have time, so you're up till midnight doing it [homework].

Student progress is measured through a variety of assessment techniques. Traditional paper-and-pencil tests are common, but teachers also use oral tests and concluding activities or projects to assess learning. "Authentic assessment strategies which allow students a choice" are one means of evaluation for the 6th grade thematic units. Daily work and projects are sometimes graded to provide the students feedback on their work. Letter grades are given for assignments and for overall progress reports on the report card.

The curriculum, instruction, and assessment of Morristown Middle School is emerging toward the student-centered middle school concept. Interdisciplinary curriculum is used part of the time; instructional strategies incorporate cooperative learning and inquiry-based learning, however, textbooks and worksheets remain a common base for curriculum. Assessment remains primarily traditional paper-and-pencil tests with some product assessment. Figure 4.17 shows the level of transition of the curriculum, instruction, and assessment.

Traditional Junior High	Emerging Middle School	Student-Centered Middle School

Figure 4.17. Extent to which the curriculum, instruction, and assessment of Morristown Middle School reflect the student-centered middle school

Learning teams of teachers and students

The student-centered middle level school is organized into teams of teachers and students who work together in the learning process. The teachers meet on a daily basis to plan interdisciplinary curriculum and instruction as well as to discuss concerns related to individual students. The evidence of learning teams in Morristown Middle School is found in the interviews of the staff and students and the observations and artifact data.

Beginning with the 1993-1994 school year, sixth, seventh, and eighth grades are organized into learning teams of teachers and students. Although the sixth grade has operated with a homeroom concept in previous years, the team approach is new to the 7th and 8th grades. Each team is comprised of three teachers who share a common group of students. Each of the three teachers is primarily responsible for two core subject areas and is allotted one 80-minute block per day for each one-third of the students on the team. Each team of teachers shares a common planning time and meets daily to "discuss mutual concerns and to aid each team in the management of their students." There are also weekly grade level meetings at which ideas and concerns which involve both grade level teams can be discussed and resolved. The exploratory teachers comprise another team and meet weekly.

The teaming structure was implemented for the first time in grades seven and eight during the 93-94 school year. Teachers are still learning the process of working in teams. The

change to 80-minute class periods has also created a need for new instructional strategies to engage the students for this length of time.

With the implementation of the core teams and block schedule, Morristown Middle School took another large step toward the student-centered middle school. While there are still some glitches to be resolved, the staff is committed to making this component of the middle school work and are well on the way to institutionalizing this practice. The level of teaming is depicted Figure 4.18.

Traditional Junior High	Emerging Middle School	Student-Centered Middle School

Figure 4.18. Extent to which learning teams of teachers and students of Morristown Middle School reflect the student-centered middle school

Exploratory programs

The exploratory program of the student-centered middle school includes those courses which often become electives at the high school level. These include visual arts, music, industrial technology, home economics, keyboarding and computer education, and guidance. Students experience each of the exploratories during the course of a year in the middle school and have the opportunity to explore talents and skills without having to choose some and eliminate others from their learning repertoire.

The exploratory curriculum at Morristown is comprised of art, music/performing arts, computer education, home economics, industrial technology, and physical education. The exploratories meet daily for one 40 minute class period. Each student participates in two exploratories at a time for twelve weeks and then rotates to new classes; throughout the school

year each student receives instruction in each exploratory for twelve weeks. Exploratory teachers work with all three grades and both teams within grades and, thus, work with every student in the school for at least twelve weeks each year. These classes are graded on a pass/fail basis although some teachers do give letter grades on daily work and tests. Students report that the "exploratories are fun" and they "should have more time with exploratories." Another benefit of the exploratories that the students report is that they are "mixed up" with students from the other grade level team. Students express that they like seeing their friends that are not in their core group.

Morristown Middle School has attempted to offer students a variety of exploratory options and each student has the opportunity to experience all exploratories without being forced to elect a limited number of exploratories. Because the exploratory offerings reflect those traditionally found in middle level schools, the exploratory program is considered to be emerging toward the ideal as reflected in Figure 4.19.

Traditional Junior High	Emerging Middle School	Student-Centered Middle School

Figure 4.19. Extent to which the exploratory programs of Morristown Middle School reflect the student-centered middle school

Advisory and support programs

Advisory and support programs are a crucial component of the student-centered middle school as this critical stage in the emotional and social development of the young adolescent demands extra attention to these developmental characteristics. The role of the advisory program is to provide every student with an adult advocate and a supportive environment among the peer group as well as provide an instructional setting for the development of life

skills such as decision making, goal setting, problem solving, and complex thinking. The other support programs, including the guidance services, are designed to meet the individual needs of students as they experience situations beyond the normal adolescent emotional volatility and to provide the extra support needed to thrive despite adverse circumstances.

Morristown Middle School has successfully implemented advisory and support programs which reflect the middle school concept. The has been achieved through the advisor/advisee (Homebase) program, at-risk services, and developmental guidance program.

Two full time guidance counselors work one-on-one with students as well as work with the administration to act as a liaison between families and the school. The developmental guidance program involves classroom instruction in grades four, five, and six. Both the students and the teachers speak positively about the role that the guidance counselors play in supporting students. One group of students emphasized that the guidance counselors were always "here to help us".

The Vulture Culture anti-bullying program is also facilitated by the counseling department, involves everyone in the school, and is credited by teachers and students as addressing a serious need in a positive way. This program provided training for staff and students in recognition and intervention with bullying behaviors among students. This program was implemented in response to a survey which identified harassment as the top concern of students and parents and delivers a clear message of zero-tolerance of these behaviors among students and staff.

The at-risk program at Morristown identifies and intervenes with students who are at-risk of school failure and are potential school drop-outs. The student assistance program, called the Assist Team, is "a creative means of identifying troubled or at-risk youth and linking them to the network of available care and resources." Interventions for at-risk youth include tutoring which takes place within the general education classroom. The tutors are students from the local two-year college and are coordinated by one of the guidance counselors.

The Homebase program provides every student with a "significant adult" in the school who "serves as an advocate, a friend, and a person to whom the student can turn for advice, understanding, and caring." Homebase meets daily for 30 minutes and within a week two days are allotted for the QUEST curriculum (a commercially-developed life skills and health curriculum), one day for SQUIRT (Sustained, Quiet, Uninterrupted Reading Time), one day for physical activity, and one day for Team Choice which might involve HOTS, current student concerns or issues, problem solving and/or decision making.

The advisory and support programs of Morristown Middle School, as described and discussed by both teachers and students, provide students with the support needed to meet the developmental demands of the early adolescent as proposed by the literature on the middle school concept. Advisory and support options include Homebase, student assistance, Vulture Culture, and developmental guidance. These programs indicate a strong advisory and support program which reflect the student-centered middle school (see Figure 4.20).

Traditional Junior High	Emerging Middle School	Student-Centered Middle School

Figure 4.20. Extent to which advisory and support programs reflect the middle school concept at Morristown Middle School

Co-curricular programs

The co-curricular programs of the student-centered middle school offer all students the opportunity to experience participation in activities beyond the classroom. Ideally, these activities are non-competitive and every student has an equal opportunity to participate. Additionally, a wide variety of activities are offered in the student-centered middle school such

that all students are able to find an activity which is interesting to them and at which they can be successful.

Co-curricular opportunities available to students at Morristown include interscholastic athletics, instrumental and vocal music, student council, speech (debate), History Club, spelling and math bees, TV Club (Good Morning, MMS), and mock trial. For students, an important aspect of their school is "opportunities to do things."

The co-curricular activity most frequently mentioned by students is sports. The variety of sport options offers many students an opportunity to participate, and yet, students assert they would expand the options even further by adding golf and swimming. The popularity of sports as an activity is also exemplified in their wish for longer seasons and more games. The sports program is typical of those in rural Iowa schools; the interscholastic teams are competitive.

Student Council "gives students a say" in what happens in their school as Student Council "makes up some of the rules." The council is made up of representatives from each homeroom class, and a new representative is selected each trimester so that three students from a homeroom have the opportunity to serve each year. Student Council is also responsible for fund raisers including a magazine sale and a poster sale.

The music program includes band and chorus and these groups rehearse during the school day. On a selective basis, students are invited to participate in 7th and 8th grade Swing Choir and/or jazz band; each of these groups practice outside the school day.

While a wide variety of co-curricular activities are available to the students of Morristown Middle School, some of these activities, particularly the interscholastic sports program, still appear to resemble the traditional extracurricular activities of the junior high school because of the selection process which influences who is able to participate. The level of implementation is shown in Figure 4.21.

Traditional Junior High	Emerging Middle School	Student-Centered Middle School

Figure 4.21. Extent to which the co-curricular programs of Morristown Middle School reflect the student-centered middle school

Flexible schedule

Flexibility in the schedule of the middle school is essential to the effective implementation and institutionalization of the middle school concept. The schedule is designed in blocks of time over which the teams of teachers have control in determining the actual use of the time for instructional purposes. The teams determine the most appropriate division of time for each unit of instruction, and the schedule changes according to need.

The schedule of Morristown Middle School is built around the core blocks of 80 minutes. Within those blocks, the core academic teachers teach two subject areas and have flexibility in how that time is used. This is a new schedule for the 1993-1994 school year and is the result of and a component of the transition to the middle school concept. As with most changes, there was some opposition to the core block schedule, but three-fourths of the way through the school year, the teachers have found that they like the schedule. One teacher summed up this shift:

> I sound like I'm preaching on the teaming. I was the one, I'll have to be honest, that was completely against it. I thought 80 minutes with [one] class, you're nuts!...I couldn't believe they were actually going to make us do that, but these kids are together and, although they get tired of each other, they are together all day long...and they stick up for each other...If somebody is down, there's somebody to pick them up. It is wonderful!

The schedule of Morristown Middle School was changed in the 1993-1994 school year to reflect the core team organization of the staff and to allow the teams control over the instructional time. In practice, the teachers have and exercise flexibility within the 80-minute

class period for which they have one group on students. There does not, however, appear to be much flexibility among the entire team schedule outside of the individual teacher's 80 minutes. This would indicate that the flexible schedule is emerging but has not yet reached the ideal level for the student-centered middle school as reflected in the continuum (see Figure 4.22.)

Traditional Junior High	Emerging Middle School	Student-Centered Middle School

Figure 4.22. Extent to which the schedule of Morristown Middle School reflects the student-centered middle school

Staff empowerment

The staff of the middle school must be empowered to make decisions effecting the operations of the school which means "giving teachers greater influence in the classroom, establishing building governance committees; and designating leaders for the teaching process" (Carnegie Council on Adolescent Development, 1989, p. 55). This includes empowerment of the administrative staff without interference from the central office as well as empowerment of the teachers to make decisions which are within their circle of influence.

A major decision making body of the school is the Site Council, the membership of which includes staff and parents. The Site Council studies issues of concern for the school, both as they arise out of the daily operation and as a part of the implementation of the middle school concept. The block schedule was studied and proposed by the Site Council. The Site Council is involved in an action research process which involves the collection, analysis, and

use of data to make decisions and guide the action of the school in implementation of the middle school concept.

With the implementation of the grade level and core teams within grade levels, the staff have also been empowered individually and in teams to make decisions regarding the daily educational experiences of their students. The commitment to staff empowerment is evidenced in the commitment to the team concept by the administrators as staff development for team leaders has been funded through district staff development moneys. The entire staff, through Phase III, has also participated in training in site-based management.

The empowerment level of the staff of Morristown Middle School appears to be consistent with the student-centered middle school. The Site Council acts as a shared governance body; teachers have been given control over the decisions affecting their classrooms. Team leaders have been designated and trained in the teaming process. This continuum indicates the high level of empowerment at this school (see Figure 4.23.)

No staff empowerment Limited staff empowerment Total staff empowerment

Figure 4.23. Level of staff empowerment at Morristown Middle School

Teacher and administrator influences

The influences of teacher engagement, teacher readiness, and principal leadership are described as they are evidenced in interviews with the students and staff, observed in classrooms, and reported in the surveys completed by the staff and students.

Teacher engagement

Teacher engagement is defined as the extent of the teacher's psychological investment in and effort toward teaching the knowledge, skills, and crafts he or she wishes students to master" (Louis & Smith, 1992). There are four types of teacher engagement; two which focus on human relationships: engagement with the school as a social unit and engagement with the students as whole, unique individuals; and two which focus on teaching and learning: engagement with academic achievement and engagement with the body of content knowledge.

Each of these types of engagement was examined for evidence of the level of engagement of the teachers at Morristown Middle School. Morristown teachers were found to be engaged with all four types of teacher engagement.

The teacher and student interviews offer insight into the level and evidence of teacher *engagement with the school as a social unit.* The teachers generally report that there is a spirit of collegiality and that people help one another to succeed. One teacher, who was new to the building this year as a result of the whole grade sharing arrangement, reported being a little apprehensive prior to the year but found the staff to be very friendly, supportive, and open. Only two people expressed any concern regarding the relationships among the staff. One simply stated,

> Of course, there's always some back stabbing that goes on. You know, it's a common place, but I think overall everybody is very concerned about everybody else and will help them in any way possible.

One side effect of the move to core-block scheduling is the isolation teachers express. Although, the teams meet daily and grade levels meet weekly, many teachers express the same concern:

> I kind of feel sometimes the opportunities [for interaction among staff] have gone down and mainly it's because of our block scheduling, because sixth grade teachers are free during their block, exploratory block, and they're the only ones free. They have interaction amongst themselves and the grade levels are actually much more. But between grade levels, I think, is out because we never see each other. When I'm free, everybody else has classes.

The principals anticipated this effect and took measures to provide an opportunity for the interaction that is being missed. All teachers consistently note their effort and express appreciation. Early morning gatherings are held in the IMC with coffee and rolls; everyone must sit at a table with staff other than their core team or grade level team. Also, at the end of each quarter, the principals have hosted a social gathering in their respective homes on a Friday afternoon which allows the staff to interact in an informal setting. The fact that most of the staff attend these gatherings is evidence of their engagement in the school as a social unit.

Engagement with students as unique and whole individuals is another type of teacher engagement. Evidence of engagement with students as whole, unique individuals is found both when teachers speak about students and when students talk about their teachers. Students report that "teachers compliment you" and "tell you 'good job'". Teachers are "patient" and "help on assignments, if you don't understand," and "cheer us up." Teachers also speak of the students in positive holistic terms, although they recognize that they are typical young adolescents.

> I hope they feel this way–that the students feel pretty free to come and talk to a teacher if they're having problems, or if they're concerned about something, or if they don't have their homework done–that they feel that they could come and give me a reason why, and I'd be willing to listen to them, and I feel the relationship is pretty good.

The application for the state recognition program states that Morristown Middle School "is concerned with the development of the whole child. We deal with students as the individuals they are, expecting them to give their best, not expecting them to 'fit' exclusive pre-conceived levels of achievement." Teachers provide opportunities for students to get help through the Independent Study time and after school. There is an after-school study program in the IMC which is used by many students to study and get help before sports practices begin.

Engagement with students as whole individuals is also evidenced in the caring that teachers demonstrate toward students. The majority of the students agree that they feel cared for by their teachers. "Teachers help you with your work." "Teachers kid with you in a

friendly tone, not like teasing in a bad tone." "Teachers care enough that they respect you." However, some students do not feel that caring and express their perception of the teachers: "Teachers don't listen to your side of the story." "Teachers sometimes treat some kids like pets and some like enemies."

Engagement in the academic achievement of the students is demonstrated through the feedback given to students. Students share that the "notes" on their work provides feedback on how well they have performed. In addition, they tell of computer sheets, smiley faces, "face with a frown on it", and Friday Folders. The primary form of feedback on their achievement as identified by students is the grades they receive.

Engagement in academic achievement is also demonstrated through expressing high expectations for performance. Expectations are communicated to students by "modeling by teachers," through the student handbook, and through classroom rules and expectations. Students report that they know what is expected of them because "the teachers tell us." Academic achievement is identified by teachers and students as the primary purpose of Morristown Middle School. Student success both in the middle school and after the middle school is important.

Teacher engagement with one's content area and body of knowledge are demonstrated through expressing personal passion for a subject, seeking ways to improve classes and to connect the subject to students' lives, being involved in professional organizations, and pursuing advanced degrees in one's field. The use of interdisciplinary curriculum and the use of a variety of teaching strategies within the core instruction block are two examples of strategies to improve classes and connect the instruction to the students real world. The Morristown Middle School teachers speak enthusiastically about their teaching.

Teachers also report participation in staff development related to their subject area as well as to instructional strategies. Another indicator of engagement with the body of knowledge is the level of education of the staff; 50% have at least a Masters' degree and

another 24% have fifteen hours beyond the Bachelor's degree. When considering the relatively young age range of the staff, the number of advanced degrees indicates a commitment to ongoing learning beyond the minimum recertification requirements.

The quantitative survey included ten items which measure teacher engagement and the analysis of those items provides a mean which reflects the overall engagement and frequency distributions which allow analysis of individual items. The level of teacher engagement among the staff at Morristown Middle School was found to have an overall engagement mean of 4.15 (on a rising scale of 1 to 5) which indicates a high level of engagement. The frequency distribution for the teacher engagement items is shown in Table 4.7. The frequency distribution for all 50 items in the Teacher Engagement Survey is in Appendix E.

Teacher engagement was also disaggregated according to subject area taught, age, years of experience, level of education, gender, and amount of staff development related to at-risk students. None of these possible groupings among the staff show any significant differences in level of teacher engagement, thus, the level of engagement in this school does not appear to be explained by any of these factors.

A mean of 4.00 on an item indicates general agreement (engagement) with the statement based on the scale used in the survey; a mean of 3.00 indicates neutrality, and a mean below 3.00 exemplifies disengagement as teachers disagree with the indicators in the item. The frequency distribution of these ten items shows very strong agreement with all statements except two. It is interesting to note that the two items with neutral ratings (Item 11 and Item 19) also have the largest standard deviation, indicating less agreement among responses on these items. Item 11, "I wouldn't want to work in any other school.", received a neutral overall response (3.26) with nine agreeing, nine neutral, and five disagreeing. Item 19, "It is important that as teachers we try to insure that all students master basic skills and subject matter course work," also received a neutral overall rating (3.83), although 17 agree, two are neutral, and four disagree.

Table 4.7. Teacher engagement item means, standard deviations, and numbers of disagree, uncertain, and agree for Morristown Middle School.

ITEM	Mean	S.D.	# Disagree	# Uncertain	# Agree
6. I frequently take on extra tasks or responsibilities that I think will benefit the school.	4.18	.85	1	3	18
11. I wouldn't want to work in any other school.	3.26	1.05	5	9	9
12. The reputation and performance of this school is important to me.	4.44	.51	0	0	23
14. I try very hard to show my students that I care about them.	4.57	.90	1	0	22
16. It's important for me to know something about my students' families.	4.11	.71	0	5	18
17. I try to make myself accessible to students even if it means meeting with them before or after school, during my prep or free period, etc.	4.39	.58	0	1	22
19. It is important that as teachers we try to insure that all students master basic skills and subject matter course work.	3.83	1.03	4	2	17
20. I am always thinking about ways of improving my courses.	4.57	.59	0	1	22
23. Interdisciplinary classes benefit teachers as well as students.	4.00	.95	2	4	17
24. Given the opportunity, I would take additional college or university courses in the subject area I teach most often.	4.22	.67	0	3	20

n = 23

The assistant principal, in describing the teaching staff, summed up the evidence of teacher engagement, saying the staff is very student-oriented; they feel they are on the cutting edge and are "engaged professionally." The level of engagement of the teachers is moderate to high for engagement with the school as a social unit, with academic achievement, and with the

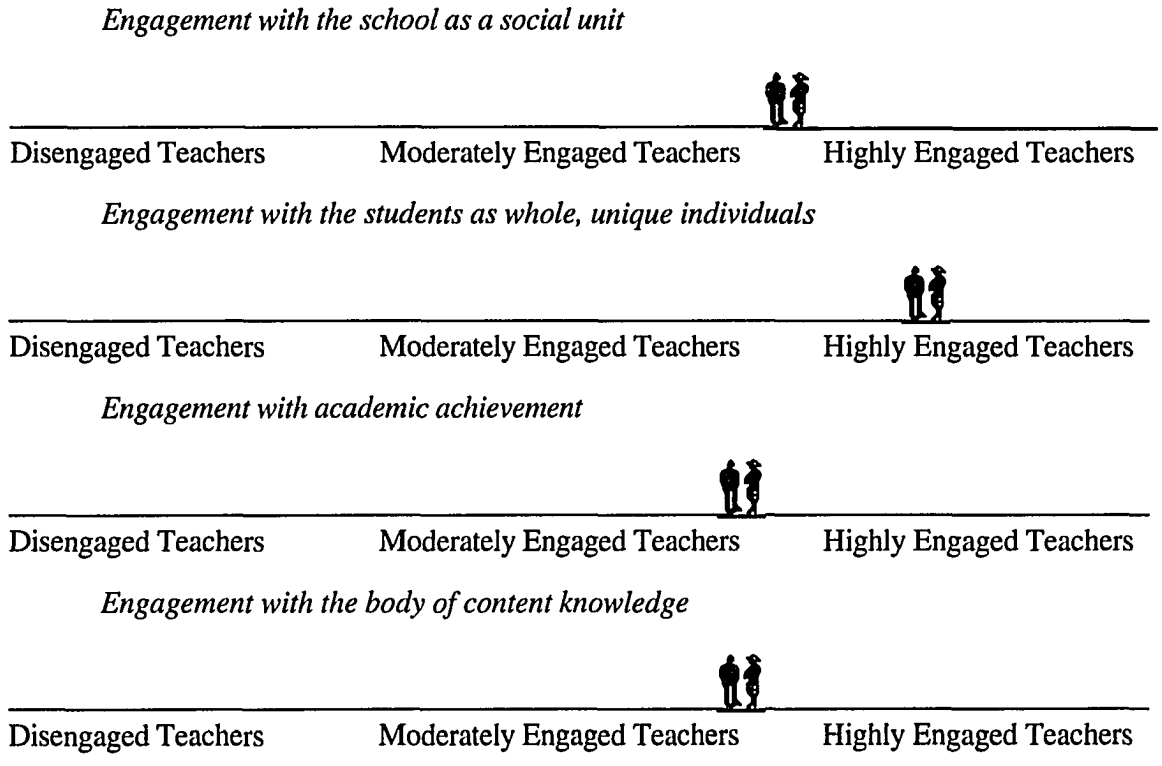


Figure 4.24. Levels of four types of engagement of teachers at Morristown Middle School

body of content knowledge; the level of engagement with the students as holistic individuals is high. The levels of each of these types of engagement is shown in Figure 4.24.

Teacher readiness

Teacher readiness to meet the needs of all students is evidenced by teachers who have the capacity (preparedness and problem acceptance), will (responsibility acceptance, willingness to change, and student potential orientation), and self-efficacy (belief that they can make a difference and perform successfully).

The evidence of readiness at Morristown Middle School is found in the interviews with teachers, students, and principals and is supported by the survey data. The Morristown

teachers demonstrate a high readiness to meet the needs of all students, particularly will and efficacy. Capacity is less strong as a factor of readiness for the Morristown teachers.

All teachers who were interviewed expressed a student-potential-oriented focus and an acceptance of their responsibility to meet the individual needs of students. This perception of the teachers was supported by the assistant principal who stated that the teachers "are student-oriented." Most teachers express that the feedback they get from students, parents, other teachers, and administrators tell them that they are making a difference. Most staff talk excitedly and positively about the changes that have been implemented related to the middle school concept, and, although a few admit reluctance toward some ideas, all express strong support for the practices that have been implemented, such as Advisor/Advisee, team planning and instruction, block scheduling, and interdisciplinary curriculum.

On the issue of capacity to meet the needs of all students, the response of teachers is less strong than that related to will and sense of self-efficacy. Although no teachers expressed a lack of capacity, they also do not talk confidently of their ability to meet the needs of all students; there is more a general agreement among the teachers interviewed that meeting the needs of the students is what the purpose of the school is and that they are constantly looking for ways to meet that goal. All the students interviewed reported that teachers are willing to help students who experience difficulty and that they offer that help both through organized Independent Study time and After-School Study Time as well as during class and at any time that a student requests help.

The Teacher Readiness Survey supports the perception of readiness that is expressed by the teachers. The means and statistical comparison data for readiness are shown in Table 4.8. The overall readiness of the Morristown Middle School staff is higher than that of the staff of other rural secondary schools in Iowa. The capacity and will of the Morristown staff are also higher than other secondary school staff, but there appears to be no difference with regard to sense of self-efficacy. Perhaps the most distinguishing difference is the strength of

Table 4.8. Readiness factor means for Morristown Middle School and probability-values for mean difference when compared to state data.

Readiness Factor/Subscale	Morristown Mean	State Mean	Probability Value
Capacity	3.92	3.65	.02*
Preparedness	3.62	3.43	.13
Problem Acceptance	4.23	4.15	.27
Will	4.30	3.83	.0001**
Responsibility Acceptance	4.31	3.94	.001**
Willingness to Change	4.48	4.23	.02*
Student Potential Orientation	4.11	3.21	.0001**
Efficacy	3.91	3.71	.06
Overall Readiness	4.05	3.73	.001**

* Statistically significant
** Highly statistically significant
n = 23

the difference between the Morristown staff and other secondary school teachers on the will to change. Morristown appears to have a much higher will to change which supports the consistent assertion that this is a staff which is very student oriented and accepting of their role in the success of students.

Based on the reports of the teachers, students, and principals and the supporting evidence from the Teacher Readiness Survey, the staff of Morristown Middle School exhibits high readiness to meet the needs of all students. The level of readiness for each readiness factor is depicted in Figure 4.25.

Principal leadership

The leadership of the principal has a strong influence on the engagement of teachers in the educational process. The following five principal leadership behaviors demonstrate engagement of the principal and promote engagement by teachers: buffering teachers from outside interventions, visibility and availability in the daily routine, delegating and empowering the professional capabilities of the teachers, confronting disengaged teachers, and developing

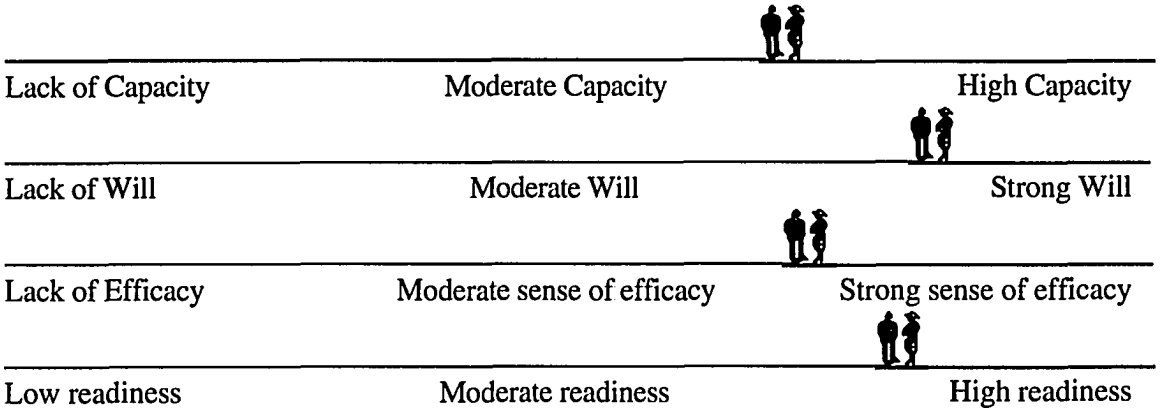


Figure 4.25. The level capacity, will, efficacy and readiness for the Morristown Middle School staff

and modeling a vision and values for the school. The principals of Morristown Middle School exhibit strong leadership behaviors which are characteristic of the transformational leader.

It is evident in what the teachers, students, and principals say that the principals, like the teachers, are engaged professionally. Students speak of the principals mostly with regard to behavior and the rules of the school. Their perception is that both the principals and the teachers make and enforce the rules, and they consistently agree that the rules are fair and everyone is treated fairly.

The principals are visible, available, and active participants in the educational processes of the school. Both principals participate in the supervision of the lunch room where they are visible to both students and staff on a daily basis. The role of each of the two principals is different, and the responsibilities of each are clearly understood.

The assistant principal has the major responsibility with regard to student behavior and sees her role as a facilitator of "uniform expectations and consequences". One example of this facilitation process is the development of a policy for special activities/events which provides

parameters and steps that maintain due process for the student while allowing teachers to determine when students have lost the privilege to participate in a special activity. The assistant principal also acts as supervisor/evaluator for some teachers, although this is primarily a role the principal assumes. In the role of supervisor, the assistant principal sets high expectations and acts as a mentor as all teachers in the building are expected and encouraged to "develop skills beyond the present level". Teachers report that both principals are very supportive of them "as long as we keep them informed. They appreciate knowing ahead of time so when they get the parent phone call, they know what they're talking about."

When asked about the administration of the school, the teachers almost always talk about the principal rather than the assistant principal. They report that he is available to them and responsive to their requests. He provides direct support by attending team meetings and helping out with classroom activities as well as indirect support through his role on the administrative cabinet of the district.

> He is very aggressive in gaining resources for the school...to the point where other buildings are jealous. They [teachers in the other buildings] say "you guys get everything at the middle school."

The principal is also said to make his expectations known through communications to staff and through the evaluation process. That his expectations are high is known to all staff and exemplified in the fact that two teachers have been terminated for inadequate performance in the seven years he has been principal. Teachers, however, seem more appreciative than threatened by his expectations as they report he is very supportive and empowering, as explained by one teacher:

> I think that we have the freedom to do what we feel is best for the student. I don't think it's written in law that we have to do something especially the way the book has it, but we know we have to be good teachers and are responsible for our actions and what we teach in the classroom.

Empowerment of the staff is also evidenced in the Site Council which includes representatives of all staff, certified and classified. This group meets regularly and provides

input to decisions as well as actually making some of the decisions regarding the work of the school. Membership on the Site Council seems to influence the perception of staff regarding their role in decision making. Although all staff interviewed report having a lot of input into decisions, those who had or are serving on the Site Council perceive their role as one of decision making, while those who have never served on the Site Council tend to report that the administration makes the decisions with input from the staff. There clearly is an understanding that some decisions were appropriate for the administration to make and take responsibility for and others were appropriate for the Site Council and the staff.

There seems to be no doubt from anyone that the principal is the leader of the school and that the assistant principal plays a strong supportive role in that leadership. The vision for the school is closely aligned with the literature-defined student-centered middle school, and the actions and decisions of the principals are consistent with the implementation of that model.

The evidence of principal leadership as presented in this case report indicates a high level of principal leadership in general. The level of engagement for each factor which indicates principal leadership is shown in Figure 4.26.

Student engagement

Student engagement is the student's investment in and effort toward learning; it is evidenced by participation in academic work, intensity of student concentration, enthusiasm and interest expressed, and degree of care shown in completing work. Student engagement is influenced by three factors: a student's underlying need for competence, which is assumed in this research to be a basic need of all students and, therefore, not measured by this study. Membership in the school is evidenced by clarity of purpose, sense of fairness, personal support, success, and caring. Authentic work is evidenced by extrinsic rewards, intrinsic interests, sense of ownership, connection to the "real world", and fun. Documentation of the level and examples of these factors are found in the responses of the students and staff, in the

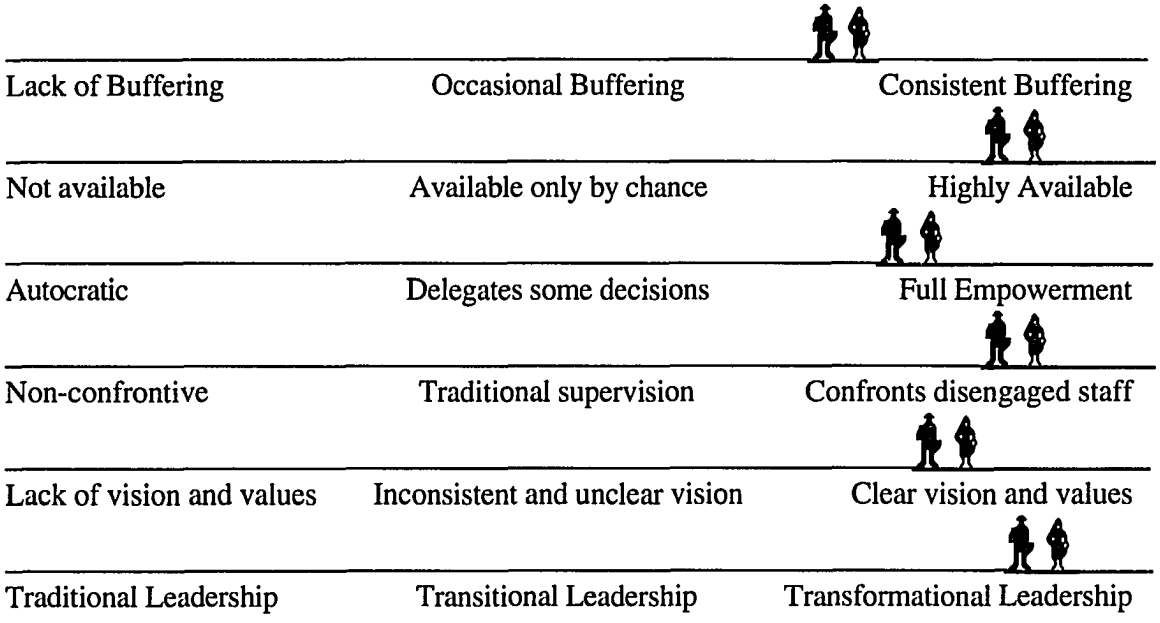


Figure 4.26. The level of principal leadership of the principals at Morristown Middle School

observation of the classrooms, in the artifacts from the school, and in the results of the Student Engagement Survey administered to all students.

Students at Morristown Middle School were found to be only moderately engaged in their academic work. The factors which influence engagement, membership and authentic work, were found to be high, however.

The Student Engagement Survey measured engaged behaviors as self-reported by the students. The level of student engagement as reported on the survey is moderate (Mean 3.83 on a scale where 1-2 indicates disengagement, 3 is uncertain, and 4-5 indicates engagement.) 69% of the students report engagement behavior, 25% are uncertain, and only 6% report disengagement. The perception of at least one teacher was very close to what the students reported; she indicated that "60% of the students are involved" with their work, but she was

Table 4.9. Means of student engagement factors for Morristown Middle School.

Engagement Factor/Subscale	Morristown Mean
Engagement	3.83
Factors which influence engagement	
Authentic Work	3.46
Ownership	2.82
Membership	3.72
Future Orientation	3.75
Peer Support and Esprit	3.16
Efficacy	4.28

n = 336

high on the disengaged percentage, asserting "That are not involved, I'd say 20%." Table 4.9 shows the mean scores for the engagement factors. Table E.1. in Appendix E provides a frequency distribution of the engagement survey.

The student engagement survey was disaggregated by groups within the student population. No significant differences were found between general education students and special education students or talented-and-gifted students. There also did not appear to be a difference between participants and non-participants in sports. However, there was a highly significant difference (p <.0001) between participants in music (Mean = 4.03) and non-participants (Mean = 3.60). There was a highly significant difference (p = .007) between genders with girls more engaged (Mean = 3.95) than boys (Mean = 3.74). When examined by grade level, the students in grade six (Mean = 4.12) were found to be highly significantly (p < .0001) more engaged than grades seven (Mean = 3.70) and eight (Mean = 3.63). No statistical difference was shown between grades seven and eight.

Examination of student engagement by grades earned also showed difference between groups. Students who earn mostly A's and B's have higher engagement that any other grouping of grades earned. Students who earn mostly B's and C's have higher engagement

Table 4.10. Means and frequencies for student engagement by grades earned at Morristown Middle School

Grades Earned	Frequency Count	Mean
Mostly A's and B's	160	4.12
Mostly B's and C's	105	3.72
Mostly C's and D's	56	3.38
Mostly D's and F's	12	3.45

n = 333

than those who earn mostly C's and D's. No other statistical differences were found between groupings. Table 4.10. shows the means and frequencies for each grade earned category.

When comparing ES groups as defined by eligibility for the free-and-reduced lunch program, there is a highly significant difference (p = .007) between groups with higher ES students (Mean = 3.92) more engaged than lower ES students (Mean = 3.69). With 38% of the student population in the low ES group, this is a large group of students who are less engaged.

The membership factor on the survey indicates moderately high sense of membership on the part of the students which supports what the students say about their school. Most students indicate that their teachers care about and support them; they know this because teachers are willing to help students both with academic concerns and with personal concerns. 44% of the students report that their teachers listen to them. Students, even those who admit to being "in trouble" a lot, consistently maintain that the rules of the school and the enforcement of those rules are fair to everyone. When asked about the purpose of the school, students again are in agreement that the purpose is to help them learn what they need to know to be successful after they leave the middle school.

Authentic work is the other factor which influences student engagement; and, while this factor is relatively strong at Morristown Middle School, it is not as strong as membership. The data from the students would indicate that this is due primarily to a lack of ownership. The pervasive perception of the students is that the teachers and principals make the rules and decisions for them and that the teachers decide what work they will do. When asked what is fun about school, one student replied, "Fun is anything you choose and the teacher doesn't."

The level of student engagement was found to be moderate at Morristown Middle School. The factors which influence student engagement were found to be moderately high. This is depicted in Figure 4.27.

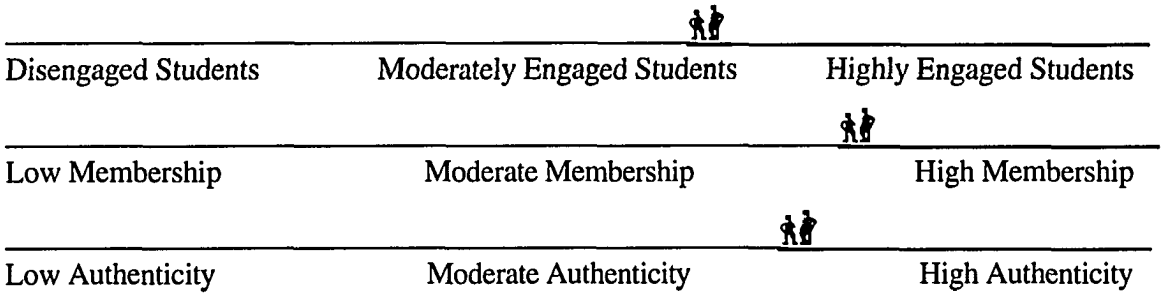


Figure 4.27. Levels of student engagement and the factors which influence engagement at Morristown Middle School

Protective factors that promote resiliency

The protective factors that promote resiliency in students are caring and support, high and clear expectations, opportunities for meaningful participation, and skill building. The evidence of the other three factors is found in the interviews, observations, and artifacts from Morristown Middle School. Morristown is high on providing three of the four protective

factors that promote resiliency. Opportunities for meaningful participation, while present in the school, are not as strong as the other three factors.

Caring and support are also elements of membership which influences student engagement and were discussed in that section of this case report, and the evidence will not be repeated here. The students of Morristown Middle School report that they feel caring and support from their teachers and from their peers.

High and clear expectations are communicated to the students at Morristown Middle School through the rules of the school and through the interactions between students and teachers. The most common means of feedback mentioned by students is the grades they receive on their report cards as well as on their class work. Most teachers also refer to classroom and school rules when identifying expectations for students. Some teachers also refer to the student handbook, which is shared with students at the beginning of the school year, and to communication from the principal over the closed circuit television network.

> Quite often he lets them know what is expected of them and the consequences of any behaviors that are not appropriate. They pretty much know the consequences before they happen which helps a lot.

Academic expectations are communicated by the teachers as they outline specific assignments and during individual classroom lessons. Teachers were observed giving students feedback on their work as well as their behavior during class. Comments written on work which was handed back to students provided specific feedback, indicated their level of performance, and offered suggestions for improving performance.

Inherent in the definition of *opportunities for meaningful participation* is the concept that participation by students must be significant to the students and must give them the sense that what they are doing is making a difference. The co-curricular program is one of the most common vehicles for schools to provide these meaningful opportunities. At Morristown Middle School, co-curricular activities include interscholastic sports, instrumental and vocal music, school plays, Student Council, school plays, History Club, spelling and math bees, TV Club

(Good Morning, MMS), and mock trial. As reported earlier, most students identify the many opportunities at Morristown as a strength of the school.

However, when students were asked what they did in school that made a difference, they told of "helping my friends with their work" and "helping people who come into the school", but they did not indicate that they perceived either the co-curricular activities or classroom activities as meaningful opportunities to make a contribution. While there is positive benefit to be derived for the students from participation in the co-curricular activities, they generally do not appear to meet the criteria of providing students the opportunity to make a contribution beyond their own personal gain.

Skill building is inherent in the primary purpose of a school, and the teachers and students of Morristown Middle School all expressed this focus on preparing students for their future including providing students with the knowledge and skills to be successful. Similar to the characteristics of authentic work, a factor of student engagement, skill building must be connected to the real world of the student in order to function as a protective factor which promotes resiliency. Both on the Student Engagement Survey and in the words of the students and teachers, there is evidence that students and teachers see the relevance of their class work to their present and future needs. On the survey, 56% of the students agree that what they are learning is useful now, and 70% indicate agreement that the school is preparing them to be successful in the future. Perhaps this teacher says it the best,

> ...to teach the students life skills, the things they're going to need to walk away with...basically, that's all there is to education, is teaching them what they need to know for their future lives, making a difference in citizenship, academically, so they know how to study...respect, relationships, life itself...

The description and perceptions of the students and staff of Morristown Middle School indicates a high level of caring and support and skill building and a moderately high level of expectations. While there appear to be multiple opportunities for participation which are available to all students equally, the students do not appear to perceive these opportunities as

meaningful beyond the personal level. The levels of each factor are depicted on the continua in Figure 4.28.

In summary, Morristown Middle School has made good progress toward the implementation of the student-centered middle school concept. The curriculum includes some thematic and interdisciplinary units, the instruction incorporates experiential and cooperative learning techniques, and the assessment strategies are being redefined to reflect the curriculum and allow more "authentic" approaches to assessment. The teachers and students have been arranged into learning teams; the core of common knowledge is incorporated into the core team instruction as well as exploratories and Homebase. The exploratory offerings offer each student the opportunity to experience a variety of learning activities. The Homebase and developmental guidance programs, supplemented with the at-risk and Vulture Culture program, provide support to the students. The co-curricular program, while maintaining the interscholastic sports program, includes a variety of clubs and activities to meet the diverse interests of the students. The core block schedule has allowed individual teachers flexibility within the 80-minute block; however, flexibility between and among the blocks has not been achieved at this time. The staff demonstrates and applies knowledge of the early adolescent developmental characteristics through instructional strategies as well as the overall middle school program, and the staff has been empowered to make decisions regarding the best interests of their students.

Teacher engagement with the school as a social unit is demonstrated not only through the teaming process, but also through informal interactions in the lunch and lounge opportunities. Engagement with the students as whole, unique individuals is high among the staff as they openly make themselves available to students needing academic help or needing to talk about other problems. Engagement with academic achievement is evident in the variety of instructional strategies employed in the classroom and the expectations for performance established for the students. The enthusiasm and commitment to improving the subjects taught

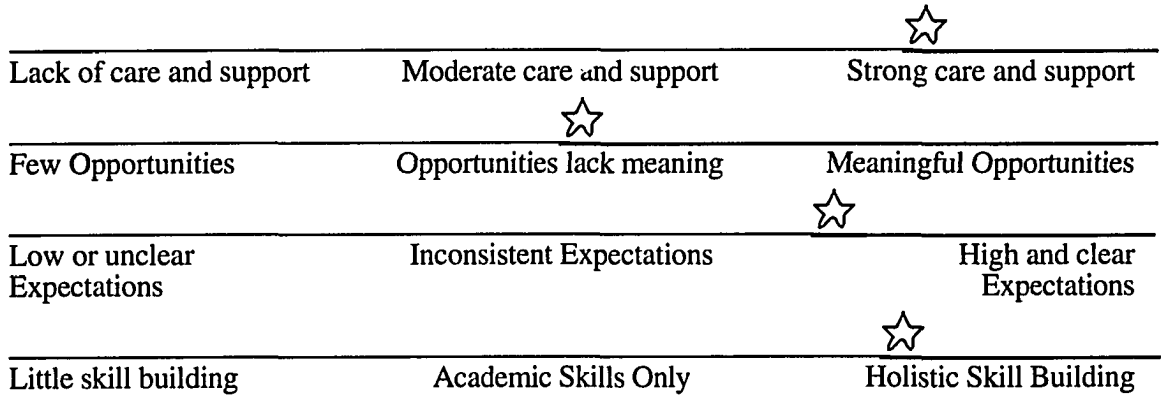


Figure 4.28. Levels of the protective factors that promote resiliency at Morristown Middle School

through interdisciplinary connections as well as making the learning authentic and real for the students demonstrates engagement with the body of content knowledge.

The teachers of Morristown Middle School demonstrate a higher readiness to meet the needs of all students than other rural secondary schools in Iowa. Although teachers express less confidence in their capacity to meet the needs of all students, there is a clear commitment to make every attempt possible to meet that goal. Their will to meet the needs of students and sense of efficacy are evident both in the changes they have made recently and in their acceptance of their responsibility to the students.

The leadership of the principals is clearly a strong factor at Morristown Middle School. Both are considered to be available to the staff and students and are visible throughout the school building on a daily basis. They see their role as one of empowering teachers to meet the needs of students, and they accomplish this through securing resources needed, delegating and empowering decision making, and sharing a clear vision and common values with the staff.

The students of Morristown Middle School demonstrate moderate engagement in the learning process; however, the higher ES students are more highly engaged than lower ES

students. There is a large proportion of the student population of Morristown which is lower ES (38%) and, thus, a large proportion who exhibit lower engagement. Students indicate a high sense of membership in the school and indicate that they feel that both teachers and other students care about them, that they are treated fairly, and that they can be successful. Students also see the relevance of the work they are doing in school and can cite examples of school activities which are interesting and fun for them.

The protective factors that promote resilience are relatively strong at Morristown Middle School. Students and staff have made a commitment to developing and maintaining a caring and supportive environment where each member of the school community can feel safe. Expectations are communicated clearly to all and the standards for performance academically and behaviorally are relatively high. Skill building includes both academic and affective skills which are designed to enable the student to perform successfully in real life situations both at the present time and in the future. There are opportunities for students to make a meaningful contribution through classroom, Homebase, and co-curricular activities; this factor, however, is less strong than the others as students find more opportunity to participate for their personal benefit than for the benefit of others.

Overall, the students, teachers, and administration of Morristown Middle School appear to be involved in a partnership of learning for all. They have made a commitment to the implementation of student-centered policies and practices which promote the full development of the early adolescent child and develop resiliency for life-long experience. One teacher summed up this commitment:

> This is the best [school] I've taught at. I've taught at smaller schools, I've taught at larger schools. This is the – How do I want to say this? – This is the best school I've taught at as far as helping the kids, as far as reaching the kids, arranging things to fit the kids' needs more so than the teachers' needs.

Cross-case analysis

The cross-case analysis of the two middle level schools in this study is guided by the research questions. Similarities and differences between the two schools are established through a comparison of the components determined to be important in the student-centered middle level school: staff knowledge of the developmental characteristics of the early adolescent; a core of common knowledge; developmentally appropriate curriculum, instruction, and assessment; learning teams of teachers and students; exploratory programs, advisory and support programs; co-curricular programs; flexible schedule; and staff empowerment.. A discussion of the adult influences provides a comparison of the two staffs with regard to teacher engagement and readiness and principal leadership. Student engagement is one defining characteristics in describing the similarities and differences between the two student populations. The protective factors that promote resiliency are compared. A composite case study profile which includes continua reflecting the level at which each school is judged to be on each of the factors is discussed at the end of the cross-case analysis.

Background

It is important to establish the context of the two schools prior to beginning the comparison of the factors of this study. The two communities share similarities and also share important differences. Both communities have some industry but are primarily agriculture based. Each also is home to a public two-year college. They are similar in size and socio-economic stratification. Each community has a wide range of economic-status (ES) with low income families as well as high income professional families. Morristown has a higher population of minority students, 5% Hispanic and about 1% African-American and Asian-American, and a higher percentage of low ES students: 38% to Jamestown's 28%.

The Jamestown students appear to have higher standardized ITBS scores, particularly in grades seven and eight. However, the differences in the ES of the communities, the differences in the school programs, and the minority population may be influencing these

scores. Minority and low economic-status students tend to perform lower than other students. Additionally, the junior high school tends to place primary emphasis on academic achievement. Because these factors were not examined in relation to the ITBS scores, this information is insufficient to establish any differences or similarities between the two groups of students.

Morristown Middle School houses grades 4-8 while Jamestown houses only grades 6-8. While this does make a difference in how the two schools operate, the actual functioning of the schools is similar in that, at Morristown, grades 6-8 function as a unit separate from grades 4 and 5. Morristown has approximately one class-size more students per grade than Jamestown. Each is the only middle level school in the school district.

There are differences between the demographics of the two teaching staffs. Jamestown Middle School's staff is an older, more tenured staff most of whom have worked in the same school for the majority of their teaching careers. They have worked together for as many as 20 years and have been through the reorganization of their school from two buildings, one housing grades 5-6 and the other grades 7-8, to this building which houses grades 6-8. The staff of Morristown Middle School has a more diverse range of age and experience and have not been together as long as the Jamestown staff. Each school's staff includes some teachers who are elementary prepared and some who are secondary prepared; Morristown, however, has a larger percentage of the staff with elementary backgrounds. The administrators of both schools indicate they have a preference for teachers with an elementary preparation and tend to fill vacancies with elementary teachers. Jamestown Middle School has one principal; Morristown Middle School has a principal and an assistant principal.

Each school provides staff development for the staff through district inservice and through Phase III. The Jamestown staff development has had a different focus each year and only in the past year has focused on the middle school concept. Morristown's staff development has been focusing on the middle school the past six years. While the specific topic for each year has changed, each topic has been related to the middle school concept.

Structures of the Student-Centered Middle Level School

This cross-case analysis of the structures of the student-centered middle level school compares and contrasts Jamestown Middle School and Morristown Middle School on each of the components studied: developmentally appropriate curriculum, instruction, and assessment; learning teams of teachers and students; core of common knowledge; exploratory programs; advisory and support programs; co-curricular programs; flexible schedule; staff knowledge of the developmental characteristics of early adolescents; and staff empowerment. The fundamental question guiding the cross-case analysis related to the student-centered middle school concept is :

> How are the two schools alike and how are they different with regard to their practice related to each of the components of the student-centered middle school?

The nine components are used to indicate whether each school is functioning more like a traditional junior high or more like a middle school. The specific examples of the policies, procedures, and practices of each of the components of the student centered middle school are included in the case study reports and summarized in the cross-case analysis. The overall picture of these components indicate that Morristown Middle School staff utilize practices and policies that are in line with the student-centered middle school, and Jamestown Middle School utilizes policies and practices which are more like the traditional junior high school.

Similarities and differences within each of the components of the student-centered middle level school are discussed in the following sub-sections.

Staff knowledge of early adolescent developmental characteristics

The guiding question regarding staff knowledge of the early adolescent developmental characteristics is: How are the staffs of the two schools alike and how are they different in both their understanding of the developmental characteristics of the early adolescent and in their application of that knowledge?

Jamestown and Morristown are similar with regard to staff understanding of early adolescent developmental characteristics. Both staffs speak of and describe their students as "normal" and "typical" middle level students; both have been exposed to the developmental characteristics of the early adolescent through print material such as their staff handbooks. However, the Morristown staff have formally studied the characteristics of middle level students through their staff development around Turning Points (Carnegie Foundation, 1989) as they were studying the implementation of the middle school concept.

The primary difference between Jamestown and Morristown is in their application of the knowledge that each staff possesses. The instructional strategies and school practices at Jamestown reflect a more traditional junior high approach which is much like the high school model but applied to younger students. The Morristown instructional strategies and school practices reflect the middle school concept and addresses the developmental characteristics of the early adolescent.

Core of common knowledge

Basic and life skills which every person needs to be successful in life form the core of common knowledge. The guiding question for this cross-case analysis is: How are the two schools alike and how are they different in the inclusion of the core of common knowledge in the curriculum and instruction of the educational program?

Both schools place emphasis on acquisition of basic skills for all students. The primary setting for teaching the basic skills is in the general education classroom where they are incorporated into the content curriculum. Special education and the at-risk tutoring programs in each school supplement the general classroom instruction.

Both schools also have a curriculum (*Skills for Adolescents* at Jamestown and QUEST at Morristown) which addresses the affective domain and healthy lifestyle choices. Morristown also includes HOTS (Higher Order Thinking Skills) in the Homebase curriculum, although teachers report a variety of approaches to Homebase which may or may not include

the HOTS curriculum. At Morristown the responsibility for these curricula is assumed by all teachers; at Jamestown the guidance counselor is primarily responsible for life skills.

Morristown is approaching the student-centered middle level school with its emphasis on basic skills, critical thinking, healthy lifestyle choices, and active citizenship, while Jamestown is moving toward the middle school but remains closer to being a traditional junior high due to the separation of responsibility for the core of common knowledge.

Developmentally appropriate curriculum, instruction, and assessment

Developmentally appropriate curriculum, instruction, and assessment incorporates the core of common knowledge into an interdisciplinary approach to curriculum which matches the instruction and assessment to the learning goals. The question guiding the cross-case analysis of this component of the middle school concept is: How are the two schools alike and how are they different with regard to the curriculum, instruction, and assessment strategies utilized in the classroom?

Both Jamestown and Morristown teach language arts, mathematics, social studies, and science as the core academic curriculum. At Jamestown each subject is taught in separate classes in each grade level. At Morristown, the subjects are taught in a core class with one teacher responsible for two subject areas during the core block in seventh and eighth grades; the sixth grade subjects are taught within the block by the homeroom teacher. An interdisciplinary approach to curriculum is used routinely by the sixth grade at Morristown with the students involved in the development of the interdisciplinary theme. The seventh and eighth grade teams at Morristown also use an interdisciplinary approach within the core time but have had less opportunity to incorporate a thematic approach to the total curriculum than the sixth grade. At Jamestown the curriculum approach is not interdisciplinary.

The instruction at Jamestown is primarily lecture/discussion, and student work focuses on textbook and worksheet assignments. The science classes and exploratory classes are more likely than other classes to incorporate hands-on, active student participation in the instruction

process. At Morristown instruction includes lecture/discussion but also incorporates cooperative learning, inquiry-based learning, and active student participation in most classes.

Assessment at both schools is primarily paper-and-pencil testing with assessment in exploratories more likely to be product-based. Some performance assessment is included at both schools as students prepare presentations for social studies and language arts classes. The sixth grade at Morristown has incorporated authentic assessment into the thematic interdisciplinary units.

In summary, the developmental appropriateness of the curriculum, instruction, and assessment at Morristown approaches the middle school concept, while at Jamestown it more closely resembles the traditional junior high.

Learning teams of teachers and students

The organization of the school into teams of teachers and students who share the responsibility for learning is a critical component of the student-centered middle school. The guiding question for this analysis is: How are Jamestown and Morristown alike and how are they different in their functioning with regard to learning teams of teachers and students?

Jamestown Middle School is not organized into learning teams at this time. There are teachers who teach the same grade level and, thus, share that grade's students, but they do not meet regularly or plan as a team. Morristown is organized into grade level teams and each grade level has two learning teams of three teachers who share the same students. The learning teams meet daily with common planning time, and the grade level teams meet weekly.

The isolation of teachers and content areas at Jamestown is typical of the traditional junior high; Morristown has adopted a team structure which is recommended for the student-centered middle school.

Exploratory programs

Exploratory programs in the student-centered middle school ensure that students experience a variety of curriculum areas such as industrial technology, visual and performing

arts, consumer and family science, technology, and other areas. The question which guides the comparison of this component is: How are the schools alike and how are they different in the opportunities students have to explore these curriculum options?

The exploratory programs of the two schools are similar; both offer a variety of exploratories including home economics, industrial technology, visual arts, computer skills, music, and physical education. The eighth grade at Jamestown also offers speech/drama and Land-Of-Plenty, an agriculture-based course. All exploratories are experienced by all three grade levels at Morristown; at Jamestown the eighth graders must elect from the exploratories offered. Both schools appear to be approaching the middle school concept with their exploratory offerings; Morristown is a little closer Jamestown simply because the exploratories are not elective at any grade level.

Advisory and support programs

Advisory and support programs in the student-centered middle school are designed to provide every student with at least one adult in the school setting with whom he/she are comfortable talking and sharing concerns and with a peer group which is supportive and caring. The guiding question for comparison on this component is: How are Jamestown and Morristown alike and how are they different in the structure and function of their advisory and support programs and in meeting the defined purpose of these structures?

On the surface the two schools appear to have similar advisory and support programs; there are, however, large differences in practice. Both schools have an advisor/advisee program (called Homebase at Morristown), a guidance program, and services for at-risk students. The advisor/advisee programs are very different in practice. Jamestown's program meets for seven to ten minutes a day and is used primarily for managerial tasks with only a short amount of time available for advisory related activities. The Morristown Homebase meets daily for 30 minutes and is used entirely for advisory activities including informal

activity-based interactions among students and the advisor, direct instruction of life skills curriculum through QUEST and the HOTS critical thinking skills.

There are differences between the guidance programs as well. The guidance instruction at Jamestown takes place during the exploratory, *Skills for Adolescents*, and is taught by the guidance counselor. At Morristown, the guidance instruction includes the QUEST curriculum of the Homebase program, which is delivered by classroom teachers, in addition to the developmental guidance classes taught by the guidance counselors. Individual counseling is available at both schools.

The at-risk services are similar at the two schools with each school offering tutoring to students who need assistance with their academic work. The tutoring at Jamestown is provided by certified staff who are assigned as at-risk tutors. The tutoring at Morristown is provided by students from the two-year college who are enrolled in education classes there and is coordinated by one of the guidance counselors. Both schools use a student assistance model to identify, refer, and intervene on behalf of students experiencing difficulties which interfere with their school performance.

Morristown has taken a proactive approach to the support services for students and has attempted to anticipate and address problem areas before they become serious. The Vulture Culture program is an example of this as the school has addressed the issue of bullying, intimidation and harassment, through the use of student training, empowerment, and responsibility. Students were trained to identify and report bullying behaviors and have been reinforced for reporting harassment through feedback from teachers as well as through intervening action resulting from their reports. The teachers were trained in conflict resolution to support the Vulture Culture program and to work with students on the bullying issue.

Because the advisor/advisee program of Jamestown Middle School functions more as a homeroom for managerial tasks and the guidance program is traditional in that the instructional and counseling responsibilities are solely the role of the guidance personnel, the advisory and

support program of Jamestown Middle School are more like those of the traditional junior high than the middle school. Students and teachers report that the advisory program of Jamestown is not meeting the goal of providing each student with an adult advocate with whom he/she is comfortable and with a supportive peer group. Morristown Middle School's advisory and support programs are like those of the student-centered middle school in that the responsibilities for instruction and counseling are shared by the instructional and guidance staff, and the advisory structures form a comprehensive adult and peer support and skill building system for students.

Co-curricular programs

Co-curricular programs include all the opportunities for involvement which are offered to students outside of the school classroom. In the student-centered middle school the co-curricular programs are designed to provide each student an opportunity to participate in activities which are interesting to the student, in which any student can participate, and at which all students can be successful. The guiding question, then is: How are these schools alike and how are they different in the variety and function of co-curricular opportunities?

Both Jamestown and Morristown have strong interscholastic sports and instrumental and vocal music programs for students. Although the instrumental and vocal music programs do meet during the school day, they are considered co-curricular because they are elective and are not a part of the general curriculum for all students. The sports programs are important to students in both schools, and nearly three-fourths of the seventh and eighth graders and half of the sixth graders in each school participate in the sports program. The students and staff at Jamestown, however, all profess that their community places a great deal of emphasis on the sports program. At Morristown, there does not appear to be that extra emphasis on sports, and the middle school co-curricular program includes a wide variety of clubs and activities beyond the sports and music programs.

Due to the wider variety of co-curricular offerings at Morristown its approach to co-curricular activities is moving closer to that of the middle school concept; because of the competitive format of the sports program, this is not a full implementation of the middle school concept. Jamestown's co-curricular offerings are like those of the traditional junior high.

Flexible schedule

The schedule of the student-centered middle school is arranged in blocks of instructional time and is controlled by the learning team of teachers and students. For comparison in this cross-case analysis, the guiding question is: How are the schools alike and how are they different in the structure and flexibility of the daily instructional time schedule?

There are significant differences in scheduling between Jamestown Middle School and Morristown Middle School. The Jamestown schedule is a traditional secondary school schedule with eight periods per day. There is no individual or team control of the schedule. The Morristown schedule is a block schedule with four blocks of time per day: three core blocks and the exploratory block. There is flexibility within each of the core blocks which allows the individual teacher to determine the use of instructional time within the 80-minute core. At the present time, there is not flexibility to change the time frame within the exploratory block or between and among the core blocks, and the team of teachers does not have the option to alter the 80-minute time frame. The Morristown schedule is emerging toward the middle school concept but full flexibility has not been achieved.

Staff empowerment

Staff empowerment, described in Turning Points (Carnegie Council on Adolescent Development, 1989), is trusting individual teachers to make and accept responsibility for the consequences of decisions affecting the day-to-day experiences of their students and establishing building governance teams to make and accept responsibility for decisions affecting the daily operations of the school. The guiding question for this component in the

cross-case analysis is: How are the schools alike and how are they different with regard to their decision making structures and the empowerment of the school staff?

There are significant differences is staff empowerment between Jamestown Middle School and Morristown Middle School. The staff at Morristown have been empowered to make decisions in each of their classrooms and within the grade level and learning teams about the policies and practices related to the instruction of their students. The Site Council has been empowered to make decisions and has been a key factor in the implementation of the middle school concept. There is clearly a commitment to staff empowerment at Morristown Middle School, and a shared responsibility for the school has been accepted by the administration and the teachers.

At Jamestown, the staff provides input for decision-making. While a directive leadership style may well be his natural style, the principal also has expressed concern that the staff is unlikely to make changes on their own. The staff generally does not suggest innovative changes for the school. He feels a need to "plant the seeds" but then prefers that a committee of staff be a part of the planning for new ideas which are implemented at the school. There is an element of the staff who use resistance as a form of personal empowerment, and they have expressed in this study that any new ideas which appear to be directed or "top down" are likely to be resisted just on that basis. The staff at Jamestown have limited individual empowerment to make decisions regarding the daily educational experiences of their students but must stay within the curriculum guides.

The staff at Morristown are empowered individually and collectively to make decisions for the benefit of their students; the staff at Jamestown do not feel empowered.

Teacher and Administrator Influences

Closely related to the issue of staff empowerment, teachers and administrators influence the experiences of students. Teacher readiness to meet the needs of all students, teacher

engagement in the educational process, and principal leadership in each of the schools in this study are compared and contrasted in this section.

Teacher engagement

Teacher engagement is the "teacher's psychological investment in and effort toward teaching." Four distinctly different types of teacher engagement are discussed separately and the two schools compared for each: engagement with the school as a social unit; engagement with the students as whole, unique individuals; engagement with academic achievement; and engagement with the body of content knowledge. The guiding questions for the cross-case analysis of teacher engagement are:

> How are Jamestown and Morristown alike and how are they different in the level of teacher engagement?
>
> What are the similarities and differences in how the teachers in each school demonstrate each of the four types of engagement ?

Engagement with the school as a social unit is evidenced in the camaraderie and collegiality among the staff and in the merging of the personal and professional lives of the staff. The staff at Jamestown have been together for a number of years and know each other well. They do not have many opportunities to interact during the typical school day, only during lunch and with those who share a planning time. Staff meetings, another opportunity for interaction, are held on an as needed basis and, like committee meetings, are held before or after school. Some of the staff members report that they used to be more engaged as a social unit before the reorganization of the buildings. There are limited organized opportunities for interaction outside of school, and few teachers from the middle school attend those infrequent events. Some attribute the lack of attendance and the decrease in social interaction from previous years to the age and lifestyle of the staff at this point in time; others suggest that it is an issue of the leadership of the school. Whatever the cause, this clearly is a staff that works side-by-side and sometimes together but does not merge personal and professional lives.

The Morristown staff is highly engaged with the school as a social unit. Team meetings afford opportunities for interaction and collegiality as a regular part of the school day. Teams have little opportunity to interact with other teams resulting in a feeling of team isolation. The early morning gatherings and the quarterly social events after school have been organized to provide opportunities for teams to interact. The staff at Morristown has made a commitment to work as a team, and this has resulted in a desire to play together as well.

Engagement with the students as unique, whole individuals is evidenced in the extent to which teachers are available to and involved with their students for both school and personal concerns. The Jamestown staff is perceived by both the students and the principal as being less engaged with the students than is desirable. These teachers, for the most part, express concern for the academic achievement of their students and want them to succeed but are likely to blame the family and the students for a lack of motivation rather than look for solutions. While this is definitely not characteristic of all, or perhaps even most, staff members at Jamestown, there is a sufficient number to create that perception.

The Morristown staff is child-centered. One teacher described the school as "the most student-centered school I've worked at." Students report that teachers show concern for them that goes beyond their school work and that they are available to listen or, as one student said, "to cheer us up." When speaking of their students, the teachers express the hope that students feel free to talk to them if they have problems. There is an underlying belief among the staff that the focus must be on the students and their needs.

Engagement with academic achievement is characterized by attempts at improvement and creativity within the curriculum, instruction, and assessment. There are differences between Jamestown and Morristown Middle Schools, although the teachers in each school have the academic learning and achievement of their students as a goal. The Jamestown curriculum model lacks flexibility, although teachers can incorporate their own style into the delivery of that curriculum. They do not feel that they have an opportunity to share ideas about

teaching. Class time is used in traditional instruction, and teachers have not had much inservice on innovative instructional or assessment strategies.

The Morristown curriculum model appears to be fluid and innovative. Teachers are encouraged to create interdisciplinary curriculum in their team planning time. An attempt is made to match curriculum, instruction, and assessment as new strategies of assessment are incorporated into the thematic interdisciplinary units. Cooperative learning and other instructional strategies which make creative use of class time are employed routinely by many teachers.

Engagement with the body of content knowledge is evidenced in the passion for the subject matter as well as participation in professional development through classes, workshops, and conferences. Both school districts provide staff development opportunities for the teachers, and each school reports participation in those activities. The Jamestown staff has focused in the past two years on outcome-based education (which was dropped) and the middle school concept. The Morristown staff has focused on the middle school concept and teaming. Additionally, teachers of each school report that they take advantage of workshops and other professional development opportunities. In each case, the body of content knowledge has been expanded by the teachers to include pedagogical strategies appropriate to their particular content area as well as the knowledges and skills within that content area. The staff of each school appear to be engaged with the body of content knowledge appropriate to their teaching assignment.

Just as the responses and observations of the teachers shows some differences between the teachers at Morristown and the teachers at Jamestown, the statistical analysis of the survey data also shows a significant difference ($p = .03$) between the two groups. The Morristown teachers are more highly engaged than the Jamestown teachers. The frequency distributions for the two schools on the ten items measuring teacher engagement were similar with only one exception. On Item #14 which addressed showing caring for students, 5 out of 29 Jamestown

teachers were neutral or disagreed with the statement; only one of 23 Morristown teachers disagreed. The means of the two schools would, thus, indicate that the Morristown teachers are engaged with the educational process while the Jamestown teachers are on the positive side of neutral.

The teachers of Jamestown Middle School are moderately to highly engaged for the engagement factors related to teaching and learning: academic achievement and the body of content knowledge; and low to moderately engaged for the engagement factors related to human relationships: engagement with the school as a social unit and with the students as whole, unique individuals. The teachers of Morristown Middle School are moderately to highly engaged with academic achievement and the body of content knowledge and are highly engaged with the school as a social unit and the students as unique, whole individuals.

Teacher readiness

Readiness to meet the needs of students is examined by looking at the readiness factors of capacity, will, and sense of efficacy. The guiding questions for the cross-case analysis are:

> How are the schools alike and how are they different in the level of each of the readiness factors?
>
> What are the similarities and differences in how the teachers of each school demonstrate readiness: capacity, will, and sense of self-efficacy?

The capacity of the Morristown and Jamestown teachers appears to be similar. Each group expresses a lack of confidence in their knowledge and skill in meeting the needs of at-risk students but seems to feel quite confident with the mainstream student. The teachers at both schools also readily acknowledge that there is a problem with students who are not succeeding in school and both cite societal conditions that place their students at risk.

There are differences in the will of the two sets of teachers. There is strong resistance to change at Jamestown, particularly when that change is perceived to be emanating from the administration, whereas the Morristown teachers seem very willing and even excited about the changes they are making. Some of the Jamestown teachers, while accepting that there is a

problem with students who are not succeeding, do not take responsibility for that problem and assert that the family and society are responsible. The Morristown teachers also cite family and society as sources for some of the problems for students. Yet, they accept responsibility and indicate that the school must play a key role in providing success for all students. While both sets of teachers express a belief that all students can succeed, the Jamestown teachers qualify that belief with the statement "with a little hard work" and seem to believe that the students who are not successful are simply not making the effort.

The Morristown teachers again appear have a stronger sense of self-efficacy than the Jamestown teachers. Both cite evidence of feedback from parents and students that they are making a difference, but the Morristown teachers speak confidently of the evidence they have that they are making a difference, while the Jamestown teachers express "hope" that they are making a difference.

The data from the Teacher Readiness Survey confirm the differences between the staff described above. While the capacity of the two staffs is similar, there are highly significant differences on the other readiness factors. Table 4.11 shows the mean of each school and the t-value for the difference between those means for each factor of readiness.

An unanticipated result was found when comparing the readiness of the teachers of these schools to the state data for teachers in rural secondary schools. In the state-wide survey Jamestown and Morristown teachers were found to have a higher readiness than the state average, but the findings of this study were different. The Jamestown staff appears to have a lower readiness than the other secondary schools in the previous study (see Table 4.3.) as well as a lower readiness than the staff of Morristown.

In summary, the teachers of both buildings demonstrate only moderate capacity to meet the needs of all students. The Morristown teachers exhibit a relatively high readiness, will, and sense of self-efficacy which is also higher than other secondary teachers in rural Iowa schools. The Jamestown teaches exhibit moderate will, sense of self-efficacy, and readiness to meet the

Table 4.11. Means and t-values for mean difference between Jamestown and Morristown Middle Schools on teacher readiness factors

Readiness Factor/Subscale	Jamestown Mean	Morristown Mean	t-value
Capacity	3.65	3.92	-1.95
Preparedness	3.32	3.62	-1.81
Problem Acceptance	3.98	4.23	-1.20
Will	3.74	4.30	-4.79**
Responsibility Acceptance	3.79	4.31	-3.24**
Willingness to Change	3.96	4.48	-4.22**
Student Potential Orientation	3.45	4.11	-4.55**
Efficacy	3.27	3.91	-3.32**
Overall Readiness	3.56	4.05	-4.18**

** $p < .01$
n = 52

needs of all students; their readiness appears to be lower than other rural Iowa secondary teachers.

Principal leadership

Principal leadership was examined in each school by examining the following specific behaviors: buffering teachers from outside intervention; visibility and availability; delegation and empowerment; confronting disengaged staff; and providing leadership through modeling vision and values. Principal leadership was also examined with regard to overall leadership style. The questions to be answered in the cross-case analysis are:

> What are the similarities and differences in how the principals in the two schools demonstrate each of the specific leadership behaviors studied?
>
> How are the principals of the two schools alike and how are they different in leadership style?

There are distinct differences in the leadership behaviors of the principals of Jamestown Middle School and Morristown Middle School. First, the Morristown principal empowers the staff; the Site Council and the learning teams have been accorded decision making power. He

is highly visible, available, and supportive of the work that the teachers are doing. He does not tolerate inadequate performance and confronts disengaged teachers. He has a vision and set of values for the school which are reflected in his practice and which have been communicated and are shared by the staff of Morristown Middle School.

The Jamestown principal is more directive and involves committees within the staff in the planning and implementation process, but the ideas for innovation generally come from him. He seems to be willing, and perhaps hoping, for ideas to originate with the staff but generally does not see this happening. He is highly visible, available, and supportive of the staff and students. His expectations for staff performance are communicated to the staff through the faculty handbook and through supervision conferences; he does not confront disengaged teachers. His vision and values for the school are clear and the staff seems to be aware of this vision; however, there is some resistance to his role and the vision is not shared by all staff.

Student Engagement

Student engagement is the extent to which students invest in and direct effort toward their learning. It is influenced by a sense of school membership comprised of caring, success, support, fairness, and clarity of purpose and by the extent to which their work is authentic and includes extrinsic rewards, intrinsic interest, ownership, "real world" connection, and fun. The questions guiding the cross-case analysis of student engagement are:

> What are the similarities and differences between the two schools in the level and evidence of membership and authentic work?
>
> How are the schools alike and how are they different in the level of student engagement?

Membership is evidenced by a caring and supportive environment, by a sense of fairness, by success, and clarity of purpose. The students of Morristown indicate a moderate sense of membership in their school. They report feeling that Morristown is a school where people care about each other, both staff and students, and can cite evidence of caring. The

Vulture Culture program has created an awareness in students, not only of what harassing behaviors are, but also that they need to care for one another and that none should tolerate harassing behaviors. They feel that the rules and expectations of them are fair and are applied equally to all students. There is less certainty with regard to success and clarity of purpose as students speak in general terms and do not define success or the purpose of the school in specific examples.

The students of Jamestown feel a slightly lower sense of membership. There is a less strong sense of caring and support at Jamestown; while some students are able to cite examples of ways that teachers demonstrate caring, others assert that the teachers do not care about them. There is much less caring between and among the students at Jamestown than observed at Morristown. The students at Jamestown report that bullying and harassing between grade levels and between "cliques" within the peer group are common. Students also report that, while the rules and expectations are fair, they do not always perceive that the rules regarding behavior are enforced equally. Students at Jamestown, like Morristown, speak in general terms about the purpose of the school.

Authentic work is achieved through extrinsic rewards, intrinsic interest, ownership, "real world" connection, and fun. The extrinsic rewards available to students are similar in each school as students receive notes, "smiley faces", pencils, pizzas, and other rewards for performance in class. Attempts to meet the intrinsic interests appear more prevalent at Morristown as students are involved in the identification and planning for the thematic units, and the co-curricular program is designed with a variety of activities to interest a diverse group of students than at Jamestown where the curriculum is teacher-driven and sports and music are the primary co-curricular opportunities. Ownership is lower in both schools as students assert that the adults in their worlds have control over what they do. There also appears to be a slight difference in "real world" connection and fun between the two schools as the students of Morristown are more likely to report that what they are doing in school is relevant to them.

Students at both schools report that school is "fun" when they are able to do hands-on activities or whenever they are able to be actively involved; this type of instructional strategy is more common at Morristown than Jamestown.

The statistical analysis of the Student Engagement Survey supports the differences observed between the two schools with one exception. The statistical analysis of the engagement means does not confirm a difference. There was no attempt made to determine time-on-task, careful completion, or other indicators of student engagement through observation. When the student engagement means are disaggregated by socio-economic status, there is a significant difference between these groups; with lower ES students reporting lower engagement than higher ES students. Morristown has a higher percentage of its student population in the low ES group, which may account for a larger percentage of its students reporting low engagement.

There is no difference between the two schools in student engagement, but membership and authentic work are stronger at Morristown than Jamestown. There is a dramatic difference is sense of ownership between the two schools. Although both school's students indicate a low sense of ownership, Jamestown is significantly lower than Morristown. The Jamestown students indicate disengagement with their peers while the Morristown students appear uncertain with regard to peers. The means for each school and t-values for the mean differences are shown in Table 4.12.

In summary, there is no difference in level of engagement of the students in the two schools. Morristown students do report a higher membership and authentic work than do the Jamestown students. Sense of ownership is low in both schools, but the Morristown students report a higher sense of ownership than Jamestown.

Table 4.12. Means and t-values for mean difference between Jamestown and Morristown Middle Schools on student engagement factors

Engagement Factor/Subscale	Jamestown Mean	Morristown Mean	t-value
Engagement	3.88	3.83	0.75
Factors which influence engagement			
Authentic Work	3.27	3.46	-3.20**
Ownership	2.37	2.82	-4.70**
Membership	3.40	3.72	-5.28**
Future Orientation	3.66	3.75	0.20
Peer Support and Esprit	2.87	3.16	-4.06**
Efficacy	4.35	4.28	0.25

** $p < .01$
n = 52

Protective Factors that Promote Resiliency

The protective factors that promote resiliency are a caring and supportive environment, clear and high expectations, opportunities for meaningful participation, and skill building. The guiding questions for the cross-case analysis are:

> How are the two schools alike and do they differ in level of each of the protective factors that promote resiliency?
>
> What are the similarities and differences in how the factors are demonstrated between the two schools?

The students and staff of Morristown are committed to and have taken visible steps to create a caring and supportive environment for all students. The teachers express a concern for the whole child, and students collectively and individually affirm that their teachers care about them. The Vulture Culture program and the zero-tolerance policy regarding intimidation and harassment have influenced the students, and a caring and concern for other students is evident among the students of Morristown. The expectations for students are clearly communicated and applied to all students. Perhaps, more significant is the student-potential orientation of the staff which communicates the belief that all students can be successful and achieve at high

levels. Skill building is evident both in academic skills and in the life skills in the classrooms as well as in the advisory and support programs. Opportunities to make a meaningful contribution is the weakest of the four protective factors. Although some of these opportunities are provided, such as the purchasing of a part of the Rainforest which came out of the thematic unit and the various fund raising activities sponsored by Student Council, these opportunities are limited.

At Jamestown Middle School some students believe there is a caring and supportive environment, but many do not. Some of the students indicate that they do not feel that their teachers care about them. Students indicate that there is strong caring and support among their friends. However, there are cliques, and there is often animosity between cliques. A number of students at Jamestown talk about bullying and harassment between grade levels and between groups. While expectations for students are clearly communicated to all students, teachers report that they have lowered their expectations over the years. At Jamestown there is a sense that there is a faction of the student population that do not meet the expectations, and the teachers seem at a loss to change this.

Skill building includes both academic skills and affective/life skills. The responsibility of the classroom teacher differs for the teaching of those skills. At Morristown, all classroom teachers are involved in both academic and affective skills through the Homebase program and the classroom; at Jamestown the affective skill building is primarily the responsibility of the guidance counselor through the *Skills for Adolescents* exploratory class.

Both Morristown and Jamestown students have limited opportunities to make a meaningful contribution. While each school provides students with opportunities to participate in a variety of activities both within the classroom and without, neither has very many examples of activities where students can make a contribution to others or to their school and community.

Morristown Middle School exhibits a moderate level of opportunities for students to make a meaningful contribution and a high level of caring and support, high and clear expectations, and skill building. Jamestown Middle School exhibits a moderate level of caring and support and skill building, a moderately high level of high and clear expectations, and a low level of opportunities for meaningful participation.

A final question for the analysis of the findings of this study frames the major question that this study purports to answer:

> What are the relationships between and among the factors in the theoretical model?

The profiles of the schools indicate that the factors are highly inter-related, that there is a systemic connection between the middle school practices, the level of teacher and principal influences, the factors which influence student engagement and the protective factors that promote resiliency. Morristown Middle School has successfully implemented most of the student-centered middle school concepts and has a commitment to be a student-centered school; Jamestown Middle School has implemented only two of the student-centered middle school concepts and functions essentially as a traditional junior high. Morristown is higher on all other factors except student engagement; there is no difference between the two schools on student engagement.

Summary

The purpose of this study was to examine influences between and among the student-centered middle school policies and practices; the adult influences of teacher engagement, teacher readiness, and principal leadership; student engagement and the factors which influence student engagement; and the protective factors that promote resiliency in each of the two middle level schools. A profile of each school is formed from the continua depicting the level of each of these factors. These profiles provide a visual picture of the findings of this study. The Jamestown profile is found in Figure 4.29; the Morristown profile is found in Figure 4.30.

THE CASE STUDY PROFILE
Jamestown Middle School

Components of the student-centered middle level school

Staff expertise and knowledge of the developmental characteristics of early adolescents

Little knowledge | Awareness knowledge | Applied knowledge

Core of common knowledge

Traditional Junior High | Emerging Middle School | Student-Centered Middle School

Developmentally appropriate curriculum, instruction, and assessment

Traditional Junior High | Emerging Middle School | Student-Centered Middle School

Learning teams of students and teachers

Traditional Junior High | Emerging Middle School | Student-Centered Middle School

Exploratory programs

Traditional Junior High | Emerging Middle School | Student-Centered Middle School

Advisory programs

Traditional Junior High | Emerging Middle School | Student-Centered Middle School

Co-curricular programs

Traditional Junior High | Emerging Middle School | Student-Centered Middle School

Flexible schedule

Traditional Junior High | Emerging Middle School | Student-Centered Middle School

Staff empowered to make decisions

Little staff empowerment | Limited staff empowerment | Total staff empowerment

Teacher Engagement

Engagement with the school as a social unit

Disengaged Teachers | Moderately Engaged Teachers | Highly Engaged Teachers

Engagement with the students as whole, unique individuals

Disengaged Teachers | Moderately Engaged Teachers | Highly Engaged Teachers

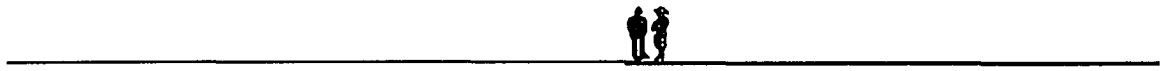
Engagement with academic achievement

Disengaged Teachers | Moderately Engaged Teachers | Highly Engaged Teachers

Engagement with the body of content knowledge

Disengaged Teachers | Moderately Engaged Teachers | Highly Engaged Teachers

Teacher Readiness



Lack of Capacity | Moderate Capacity | High Capacity

Lack of Will | Moderate Will | Strong Will

Lack of Efficacy | Moderate sense of efficacy | Strong sense of efficacy

Low readiness | Moderate readiness | High readiness

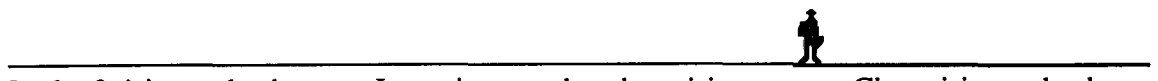
Principal Leadership

Lack of buffering | Occasional buffering | Consistent buffering

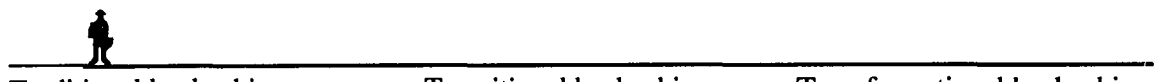
Not visible or available | Available only by chance | Highly visible and available

Directive | Delegates some decisions | Full empowerment

Non-confrontive | Traditional supervision | Confronts disengaged staff

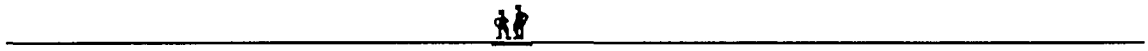


Lack of vision and values | Inconsistent and unclear vision | Clear vision and values



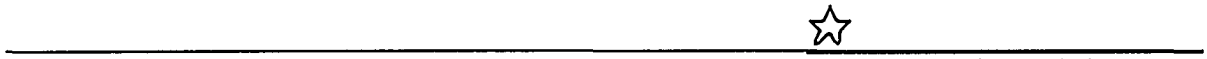
Traditional leadership | Transitional leadership | Transformational leadership

Factors which influence Student Engagement



Student Engagement

Protective factors which promote resiliency



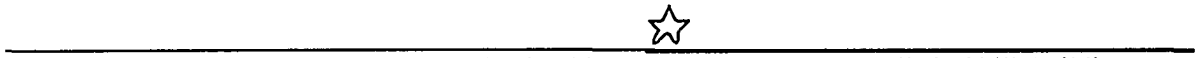


Figure 4.29. The Case Study Profile for Jamestown Middle School

THE CASE STUDY PROFILE
Morristown Middle School

Components of the student-centered middle level school

Staff expertise and knowledge of the developmental characteristics of early adolescents

Little knowledge — Awareness knowledge — Applied knowledge

Core of common knowledge

Traditional Junior High — Emerging Middle School — Student-Centered Middle School

Developmentally appropriate curriculum, instruction, and assessment

Traditional Junior High — Emerging Middle School — Student-Centered Middle School

Learning teams of students and teachers

Traditional Junior High — Emerging Middle School — Student-Centered Middle School

Exploratory programs

Traditional Junior High — Emerging Middle School — Student-Centered Middle School

Advisory programs

Traditional Junior High — Emerging Middle School — Student-Centered Middle School

Co-curricular programs

Traditional Junior High | Emerging Middle School | Student-Centered Middle School

Flexible schedule

Traditional Junior High | Emerging Middle School | Student-Centered Middle School

Staff empowered to make decisions

No staff empowerment | Limited staff empowerment | Total staff empowerment

Teacher Engagement

Engagement with the school as a social unit

Disengaged Teachers | Moderately Engaged Teachers | Highly Engaged Teachers

Engagement with the students as whole, unique individuals

Disengaged Teachers | Moderately Engaged Teachers | Highly Engaged Teachers

Engagement with academic achievement

Disengaged Teachers | Moderately Engaged Teachers | Highly Engaged Teachers

Engagement with the body of content knowledge

Disengaged Teachers | Moderately Engaged Teachers | Highly Engaged Teachers

Teacher Readiness

Lack of Capacity — Moderate Capacity — High Capacity

Lack of Will — Moderate Will — Strong Will

Lack of Efficacy — Moderate sense of efficacy — Strong sense of efficacy

Low readiness — Moderate readiness — High readiness

Principal Leadership

Lack of Buffering — Occasional Buffering — Consistent Buffering

Not available — Available only by chance — Highly Available

Directive — Delegates some decisions — Full Empowerment

Non-confrontive — Traditional supervision — Confronts disengaged staff

Lack of vision and values — Inconsistent and unclear vision — Clear vision and values

Traditional Leadership — Transitional Leadership — Transformational Leadership

Factors which influence Student Engagement

Low Membership	Moderate Membership	High Membership

Low Authenticity	Moderate Authenticity	High Authenticity

Student Engagement

Disengaged Students	Moderately Engaged Students	Highly Engaged Students

Protective factors which promote resiliency

Lack of care and support	Moderate care and support	Strong care and support

Few Opportunities	Opportunities lack meaning	Meaningful Opportunities

Low or unclear Expectations	Inconsistent Expectations	High and clear Expectations

Little skill building	Academic Skills Only	Holistic Skill Building

Figure 4.30. The Case Study Profile for Morristown Middle School

It is important to note that neither of these schools is extremely low on any of the engagement, readiness, leadership, or protective factors. Neither school could be classified as ineffective or harmful to students. Both are experiencing success to some degree with the educational process they have defined. There are, however, differences both in practice related to the middle school concept and in the factors of readiness, engagement, and leadership. There are also differences in the level of the protective factors that promote resiliency. These differences, and the similarities, between the two schools inform the answers to the research questions of this study.

This study was designed to examine the school factors of the student-centered middle school, the adult factors of teacher engagement and readiness and principal leadership, and the student factors of engagement and resiliency in two middle level schools. Chapter 4 begins with individual case reports for each of the two schools in this study which provide the reader with the rich description of each school with regard to the factors of this study. A cross-case analysis compares and contrasts the two schools on each factor and concludes with an analysis of the factors from a holistic viewpoint. The implications and significance of these findings are discussed in Chapter 5.

CHAPTER 5. CONCLUSIONS

This study was conducted in two middle level schools to examine the student-centered middle school policies and practices; the adult influences of teacher engagement, teacher readiness, and principal leadership; student engagement and factors that influence student engagement; and the protective factors that promote resiliency. The primary purpose of the study was to determine the influences and interactions between and among these factors. The first section of this chapter presents a summary of the study and the findings. This section is followed by the conclusions and a discussion of the implications of the findings and conclusions. Limitations of this study and recommendations for further research complete this chapter.

Summary of the Study

This study used a case study design in two rural Iowa middle level schools. Five days were spent on-site in each school; one researcher spent one day, one researcher spent three days, and one researcher spent five days in Morristown; and one researcher spent two days, one researcher spent three days, and one researcher spent five days in Jamestown. Group interviews with students involved 105 students at Jamestown and 102 at Morristown; individual interviews with 11 students at Jamestown and nine at Morristown were also conducted. Individual interviews with staff were conducted with 21 teachers and the principal of Jamestown and with 16 teachers and the assistant principal of Morristown. The interview questions for all three types of interviews were designed to glean information about each of the factors of this study from the experiences of those interviewed. These questions, in most cases, did not use terminology, such as "level of engagement with the school as a social unit", but used language which was familiar and common to the everyday language of the interviewees and avoided leading their responses.

Classroom observations were structured to replicate an average student schedule for each grade level in each school; there were three full days of observation in each school. Artifacts from each school were analyzed. The qualitative data were supplemented by three quantitative surveys. The Teacher Engagement Survey and Teacher Readiness Survey were given to all teachers, and the Student Engagement Survey was given to all students in grades six, seven, and eight.

Findings

Data sources were triangulated to provide the rich description included in the case study reports. A cross-case analysis identifies the similarities and differences between the two schools with regard to the factors of this study. Chapter 4 contains a detailed account of the findings of this study including the two case study reports and the cross case analysis. A summary of the findings is presented here followed by the conclusions reached by the researcher and the discussion of the implications of the findings.

1. Jamestown Middle School's structures resemble those of the traditional junior high while Morristown Middle School's reflect those of the student-centered middle school. Neither school is "purely" middle school or junior high, but each exhibits strong characteristics of its identified model. To enhance the written presentation of these findings and conclusions, Morristown is referred to as the "middle school" and Jamestown as the "junior high." Those labels replace the school names in the remainder of this chapter.
2. Teachers in the middle school are more engaged than those at the junior high with the relationship-oriented types of teacher engagement: engagement with the school as a social unit and engagement with the students as whole, unique individuals.
3. Teachers in both schools appear to be equally engaged in pedagogy-oriented types of activities: engagement with academic achievement and engagement with the body of content knowledge.

4. The middle school teachers exhibit a higher degree of readiness to meet the needs of all students than do the junior high teachers. While the capacity of teachers in both schools is comparable, the middle school teachers have stronger will and a stronger sense of self-efficacy.
5. The middle school teachers demonstrate a higher degree of readiness than other secondary teachers in rural Iowa; the junior high teachers appear to have a lesser degree of readiness to meet the needs of all students than other secondary teachers in rural Iowa.
6. The junior high principal employs a directive leadership style which does not appear to empower either the staff or the students; the middle school principal uses an empowering style, and staff and students have taken responsibility for decision making.
7. The level of student engagement is similar in the two schools.
8. School membership and authentic work, the factors that influence student engagement, are both higher in the middle school than the junior high.
9. Caring and support, high and clear expectations, and skill building, three of the four factors that promote resiliency, are stronger in the middle school than in the junior high. The fourth factor, opportunities for meaningful participation, is similar in the two schools.
10. The middle school is stronger than the junior high on most of the factors of this study and similar on all others; the junior high was not found to be stronger on any factor of this study.
11. Empowerment is a key factor for both staff and students in both schools; staff in the middle school is more empowered than the staff in the junior high. Students in the middle school are more empowered than students in the junior high, although neither express a strong sense of empowerment.

Conclusions

The findings of this study lead the researcher to make conclusions that are important for those concerned about middle level students. The conclusions of this study give meaning to the findings and provide the building blocks for discussion of implications of this study. Conclusions are:

1. The two schools in this study are different; Morristown is a student-centered middle school, and Jamestown is a traditional junior high.
2. The student-centered middle school is higher on teacher engagement and teacher readiness than the traditional junior high.
3. The principal of the student-centered middle school uses an empowering leadership style; the principal of the traditional junior high uses a directive leadership style.
4. The student-centered middle school is stronger on the factors that influence student engagement than the traditional junior high, but there does not appear to be a difference between the two schools on level of student engagement.
5. The student-centered middle school is stronger on the factors that promote resiliency than the traditional junior high.
6. The factors of this study separate into two categories: relationship-oriented factors and pedagogy-oriented factors.
7. The relationship-oriented factors are higher in the student-centered middle school than in the traditional junior high; the pedagogy-oriented factors tend to be similar in the two schools.
8. Those factors which are relationship-oriented tend to be synchronous and to be separate from the pedagogy-oriented factors which also tend to be synchronous.
9. Empowerment is a key factor and is synchronous with the relationship-oriented factors.
10. The system formed by the student-centered middle school, the adult influences, and the student factors enhances the protective factors that promote resiliency.

Discussion

This study was designed to examine the influences between and among four sets of factors: the student-centered middle level school, the adult influences, student engagement, and resiliency. In order to understand these relationships it is necessary, first, to describe each of the factors as it exists in each of the schools in the case study. This study has enabled the researcher to provide that description and to reach some conclusions about the relationships between and among the factors. This study was unable to examine the "why" and "how did it come to be" questions; more information is needed to begin to further clarify how the factors influence one another. The findings indicate there is a relationship between the student-centered middle school; the adult influences of teacher engagement, teacher readiness, and principal leadership; student engagement and factors that influence engagement; and the protective factors that promote resiliency. The findings further indicate that this relationship appears to be highly interactive.

This discussion begins with a comparison of the two schools and the factors as they are found in the two schools. A categorization of the factors into relationship and pedagogical factors is explained followed by a discussion of the relationships between and among the factors of the study. Empowerment as a key factor is described, and the model for this study is revised based upon the findings and conclusions.

Middle School vs. Junior High

The first task in this study was to determine if there were differences in the middle school structures of the two schools being studied. It was clear from the initial contact with the two principals and throughout the entire data collection process that there are marked differences between the two schools. Some differences should be expected, however, as both practical experience in schools and any previous research in schools clearly indicates that schools are organizational systems comprised of the structures and individuals within those systems. Given the uniqueness of individuals within schools and the community context of the

school both indicate that differences between schools are predictable (Lewis, 1989; Louis & Miles, 1990; Rosenholtz, 1991).

The differences between these schools go beyond those which are typically to be expected. The fundamental structures of these two schools are different; one school has made a commitment to become a student-centered middle school and has successfully implemented the structures related to the middle school concept. The other school, while currently considering the middle school concept, has not made that commitment nor has it implemented the structures of the middle school concept. These schools were not selected because they were different. In fact, it was not known prior to the study that this difference existed. These differences contribute significantly to the findings of this study as they provide the opportunity to study the adult and student factors in relationship to the student-centered middle school.

When the history and context of the middle school concept is examined in each school, it is not surprising that one school has implemented the middle school practices and the other has not. The middle school (Morristown) staff has been studying and gradually implementing the student-centered practices since 1988; the entire staff is committed to the development and maintenance of the middle school model. The junior high (Jamestown) staff has been studying the student-centered practices of the middle school for only one year and have only implemented two middle school practices, advisory and exploratory programs; not all staff members are convinced that the middle school practices are appropriate or desirable for them.

The middle school concept is a package of components which are based on the developmental needs of the early adolescent which differentiates it from the traditional junior high. The traditional junior high is, by nature, fragmented into separate classrooms, individual teachers, and segregated content areas. The literature on the middle school concept, while acknowledging that no school meets the "ideal", clearly establishes that these components work in concert with one another to form the middle school concept (Carnegie Council on Adolescent Development, 1989; George, Stevenson, Thomason, & Beane, 1992; Merenbloom, 1988;

Wiles & Bondi, 1986). The components of the student-centered middle school form a synergistic system while the components of the traditional junior high school work independently of one another. Because of the synergistic nature of the middle school concept, it is more useful for the purposes of this discussion to label each school as a unit rather than as fragmented components. The adult influences and student-based factors are examined in relationship to the middle school and/or junior high models.

Adult influences

Teacher engagement, teacher readiness, and principal leadership are the adult factors included in the model for this study. The relative level of each of these factors in the middle school and the junior high and likely explanations for the relationships between and among these factors are discussed in this section.

The staff is an integral piece of the student-centered middle school model. It is not surprising then, that teacher engagement and teacher readiness are both higher in the middle school than the junior high. The middle school concept, by definition, engages teachers in activities in which they are encouraged to take responsibility and to be active participants in the entire educational process of the school.

Teacher engagement with the school as a social unit seems a likely result of the teaming and shared-decision making practices of the middle school. As teachers work as a team on a regular basis and engage in conversation and dialogue around professional issues, it is natural that the increased understanding of each other increases engagement on the personal as well as professional level. However, the junior high, where teachers report being isolated from one another professionally and personally, does not provide the opportunities for teachers to be engaged with one another frequently and regularly.

Engagement with the students as whole, unique individuals also seems a likely result of the student-centered middle school. The entire philosophy of the middle school is based upon meeting the needs which result from the physical, emotional, social, and intellectual

characteristics of the early adolescent. It is only natural that teachers who are committed to the middle school philosophy will be engaged with their students in a holistic way. The subject matter orientation and segmentation of the junior high school, however, diminishes involvement with the whole child as teachers are responsible only for curriculum and instruction within a brief 40-minute block of time with each group of students.

It also is not surprising that teacher engagement with academic achievement and with the body of content knowledge are at a similar level in the middle school and the junior high. Neither school has abandoned the fundamental purpose of schools which is the education of the child; this is reflected in similar levels of engagement with academic achievement and with the body of content knowledge.

The second of the adult influences in the research model is teacher readiness which, like teacher engagement, is higher in the middle school than the junior high. It is not surprising that teachers who are committed to a student-centered philosophy and who are highly engaged with each other and with their students are more ready to meet the needs of those students. Not only are they committed to meeting those needs, but they have a support base from which to draw when meeting those needs seems to be overwhelming.

The difference in level of readiness between the middle school and the junior high teachers is best understood through an examination of the elements of readiness. The middle school teachers and junior high teachers are similar in their capacity to meet the needs of students but are significantly different in their will and sense of self-efficacy.

Capacity is comprised of preparedness and problem acceptance. Neither set of teachers reports that they are well prepared to meet the needs of *all* students, even though both groups clearly accept that there are students whose needs place a strain on the school, thereby causing a problem. The difference in readiness is more clearly defined by their reactions to the problem than to their recognition that the problem exists. The middle school teachers have a stronger will and sense of self-efficacy, the other two elements of readiness, than the junior high

teachers. Again, it is not surprising that teachers in a student-centered environment are more likely to view student potential orientation more positively, to accept responsibility for meeting the needs of students, and to be willing to change their practices to achieve that end. A junior high is less likely to foster these beliefs; a content-oriented mindset influences teachers to accept the proposition that their role is to teach/present the content and that the student is responsible for his/her own learning.

The junior high teachers exhibit a significantly lower sense of self-efficacy than the middle school teachers. This may be explained by the fact that the junior high model has been found to be an ineffective instructional model for the early adolescent (Beane, 1990; George, 1993; George, Stevenson, Thomason, & Beane, 1992). Because the junior high teachers employ this model, it is less likely they have achieved the success with their students that their middle school counterparts have achieved. A primary influence on efficacy is success, thus, it is understandable that the junior high teachers would exhibit lower levels of efficacy than the middle school teachers.

The third of the adult factors that influence the theoretical model of this study is principal leadership. The difference in leadership style between the two principals of these schools is significant. The literature on leadership as it relates to changing or transforming organizations stresses the importance of leadership behaviors and identifies leadership styles which support change. Kouzes and Posner (1987) describe transformational leaders as those who challenge the process by searching for opportunities to change and by taking risks; who inspire a shared vision; who enable others to act by fostering collaboration and strengthening others; who model their values and beliefs; and who encourage the heart by recognizing contributions and celebrating accomplishments. Sergiovanni (1992) in Moral Leadership describes the stages of leadership and matches them to the stages of school improvement. He asserts that true transformation of the organization of American public schools will not be achieved until "moral leadership" is achieved. At this level the improvements or innovations

become routines, allowing the organization to begin to look at the next challenge or improvement of its practice. The middle school principals use a leadership style which is transformational and approaches the moral leadership stage. The synergistic nature of the middle school with its inherent teaming and empowerment components would suggest that the leadership style of the middle school principal would be an appropriate fit for the middle school concept.

In summary, the teacher engagement, teacher readiness, and principal leadership are each different in the two schools, and all are higher/stronger in the middle school than the junior high school which makes sense because the middle school is a student-centered philosophy that places the staff in a decision-making role.

Student factors

Given the student-centered approach of the middle school concept, it is not surprising that the middle school is stronger in those factors which center around the student. School membership and authentic work, the factors that influence student engagement, both have elements which are similar to the student-centered values and beliefs which underlie the middle school concept. It would also be expected that the junior high is less likely to provide these factors because the national middle school movement is the direct result of previous research suggesting that the traditional junior high does *not* meet the developmental needs of the early adolescent (George, Stevenson, Thomason, & Beane, 1992).

What is surprising, and somewhat disappointing, is that this study did not find a difference in student engagement between the middle school and the junior high. It would seem that with the implementation of the middle school concept, students would become more engaged in their academic work and their achievement would increase. Previous research indicates that student achievement is increased in the middle school (George & Oldaker, 1985), and that student engagement and student achievement are related (Newmann, 1992).

There are some possible explanations for this unexpected finding. One likely factor is the socio-economic level of the students in the schools. Newmann (1992) reports that lower SES students are more likely to be disengaged than other groups. In this study lower SES students were significantly less engaged than higher SES students. The middle school in this study has a higher percentage (38%) of lower SES students than the junior high (26%), thus it may be that the mean engagement for students in the middle school was lowered by the disproportionate number of low SES students.

Another factor to consider is the length of time that the middle school has been operating as a middle school. This is a relatively new innovation to the school. While it was initiated in 1987, some components, such as teaming, an important component of the middle school concept, have only been implemented during the current school year. Research indicates that it takes three to five years to see the impact of changes in schools (Fullan, 1991); therefore, it is probably too early to expect significant changes in student engagement or student achievement in this middle school.

The use of a survey to determine the level of student engagement may have contributed as well. Although this survey has been used in other studies, the possibility still remains that a survey is not a useful measure of the engagement of middle school students. Without any other data source for triangulation, this cannot be determined.

Relationships Between and Among the Factors

The relationships between and among the student-centered middle school, the adult influences, and the student factors appears to be highly interactive, although the relationships do not appear to be linear or equally reciprocal. This section discusses the categorization of the factors into relationship-oriented and pedagogy-oriented factors, then describes the synchronicity and synergism within the system formed by the factors. Empowerment which emerges as a key factor in the model of this study is then discussed. The section concludes

with a description of the relationship between the student-centered middle school, the adult influences, and the protective factors that promote resiliency.

Relationship-oriented and pedagogy-oriented factors

Grouping the factors of this study into discrete categories offers deeper understanding of the similarities and differences among the factors that influence the protective factors that promote resiliency. Louis & Smith (1992) collapse the four types of teacher engagement into two categories, those which focus on relationships and those which focus on pedagogy. Relationship-focused factors are those which involve either interpersonal (between persons) or intrapersonal (within the person) interactions and understanding. Pedagogy-oriented factors are those which focus on teaching and learning. All the factors of this study can be categorized into these two categories. A deeper understanding of the relationships between and among the factors in the model is gained by examining the results in these two categories.

In this study, the adult factors which are relationship-oriented are: teacher engagement with the school as a social unit; teacher engagement with the students as whole, unique individuals; teacher readiness, specifically the elements of will and self-efficacy; and principal leadership. The student factors which are relationship-oriented are: school membership and authentic work and the protective factors that promote resiliency. The student-centered middle school as a whole is relationship-oriented because of its focus on the developmental characteristics of the early adolescent.

The factors in this study which are pedagogy-oriented include the following adult factors: teacher engagement with academic achievement; teacher engagement with the body of content knowledge; and capacity (as an element of teacher readiness). The junior high model, with its emphasis on subject matter, is primarily pedagogy-oriented. Although it is fundamentally relationship-oriented, the student-centered middle school also has elements which focus on pedagogy as teaching and learning are a primary function of all schools.

The relationship-oriented factors are all stronger in the middle school than in the junior high while the pedagogy-oriented factors tend to be similar in the two schools. Again, given the student-centered focus of the middle school concept as well as the teaming and staff empowerment that result from the middle school philosophy, it is not surprising that the relationship-oriented factors are stronger in the middle school. Nor is it surprising that the two schools are similar in the level of the pedagogy-oriented factors. The purpose of both schools continues to be teaching and learning. It may be worthwhile to note that, despite the student-centered focus of the middle school, it is no less pedagogy-oriented; it apparently does not have to sacrifice one to attain the other.

Synchronicity and synergy within factors

Whether the factors are categorized as school, staff, and student factors or as relationship-oriented and pedagogy-oriented factors, it is clear that the factors do not separate into independent entities. Rather, they appear to work together in synchronicity– where one is high, the others tend to be high; where one is low, the others tend to be low. There appears to be stronger synchronicity among the relationship-oriented factors and among the pedagogy-oriented factors. However, this synchronous relationship appears to exist between relationship-oriented factors and pedagogy-oriented factors as well. This relationship is like that of the members of an orchestra where the rhythm and tone of the various instruments move together to form the music. Within an orchestra the various sections, such as percussion, brass, woodwind, and strings, each form a tighter synchronicity to create their part of the total music experience. The activities within an orchestra are also synergistic because as all the instruments join together, the resulting musical product is far greater than any of the instruments create in solo.

Like the orchestra, in addition to being synchronistic, the factors in this study also appear to be synergistic; not only do they appear to be high and low together, but they also appear to work together to become something greater than the sum of the individual factors.

This is evidenced in the relationship among the factors within the junior high and within the middle school. While there is some evidence of some strength for all of these factors in the junior high, none of the student factors (school membership, authentic work, and the protective factors that promote resiliency) are strong in the junior high. However, in the middle school, where all of the factors come together and all of the relationship-oriented factors are high, the result appears to go beyond the sum of the parts, and the synergy that results apparently benefits both students and staff. The model formed by all of these factors, then, is both synchronous and synergistic.

Empowerment

Empowerment appears to play a more significant role than originally proposed in the theoretical model of this study. Empowerment originally was posited as a component of the student-centered middle school, one behavior characteristic of principal leadership, and a part of student engagement through a sense of ownership. It was proposed to be a factor in what people do and how students are engaged; yet, empowerment of both teachers and students emerged as a key factor related to all other factors. The middle school teachers, who are empowered, identify empowerment as a source of their success. The junior high school teachers and the students in both schools, none of whom feel a high level of empowerment, constantly talk about the need to be empowered. It can be assumed, then, that empowerment is a key factor in the synergistic model which provides the protective factors that promote resiliency.

Empowerment was found in this study to be synchronous with the other relationship-oriented factors and, thus, was higher in the middle school than the junior high for both staff and students. Given the isolation of teachers in the junior high and the directive leadership style of the principal, it is to be expected that empowerment would be lower in that school. Similarly, the teaming of the middle school coupled with the empowering leadership style of

the principals and the structural empowerment of the Site Council would naturally lead to a sense of empowerment for the teachers.

While the middle school students do report a higher sense of ownership and empowerment than their junior high peers, neither indicates a high level of empowerment. Students simply do not feel and are not empowered to make decisions and take responsibility for their learning. This is not particularly surprising; American schools traditionally have exercised more *control over* than *empowerment of* the students in those schools. One of the areas of discussion with regard to transformation of the curriculum and instruction in schools today is the shift from the teacher as the primary worker in the school to a model where the students do the work and the teacher facilitates and coaches (Beane, 1990; Glasser, 1990; Glickman, 1991).

A second factor in the lack of empowerment of the students in these middle level schools is the developmental stage of the students in these schools. Socially and emotionally, the early adolescent is attempting to let go of childlike behaviors and adopt adultlike behaviors. There is a natural conflict both within the student and between the student and the adults who are responsible for assisting in the growth and development of the student. In this stage, the early adolescent is likely to view any adult intervention as dis-empowerment.

Maeroff (1988) compares teacher empowerment to professionalization. He suggests that empowerment of teachers requires boosting the status of teachers, increasing the knowledge base of teachers, and building collegiality between and among teachers and administrators. These strategies are very close conceptually to the staff-related components of the student-centered middle school and of teacher engagement and teacher readiness. Maeroff's strategies, when applied to students, also appear to be synonymous with the concepts of membership, authentic work, and the protective factors that promote resiliency. Students who are empowered to act on their own behalf are more likely to experience school membership, authentic work, and the protective factors that promote resiliency. It, thus,

makes sense that empowerment plays an important role in promoting the synergistic relationship between all these factors. Empowerment of both students and staff is a key factor in the system which is formed by the student-centered middle school, the adult influences of teacher engagement, teacher readiness, and principal leadership; and the factors that influence student engagement and promote resiliency.

Impact on the protective factors that promote resiliency

The protective factors that promote resiliency are student-centered by nature, and it is not surprising that these factors are stronger in the middle school than in the junior high. Students in the middle school are being educated in a holistic manner in an environment which is based upon their developmental needs and is facilitated by adults who are empowered to take action to benefit the students and are actively engaged in the educational process. It is to be expected that these students would experience caring and support, high and clear expectations, opportunities for meaningful participation, and skill building. It is equally understandable that the protective factors would be weaker in a junior high school which is fragmented into isolated teachers and classrooms with little opportunity for connections between people or content within the educational process. The junior high school does appear to provide high academic expectations and promotes academic skills which is understandable given the pedagogical focus of the junior high school model.

Previous research has established that these protective factors do promote resiliency in children and in adults (Benard, 1991; Garmezy, 1991; Hawkins & Catalano, 1992). The presence of the protective factors that promote student resiliency in the middle school is sufficient reason to encourage schools to transform from a junior high to a middle school. If students are more resilient, they have a much better chance at overcoming adversity and experiencing success in school.

The overarching assumption of this study was that the student-centered middle school provides the protective factors that promote resiliency; the conclusions of this study support

that assumption. The protective factors that promote resiliency are stronger in the student-centered middle school where the adult factors are also stronger; they are weaker in the junior high. This indicates that the system formed by these factors does strengthen the protective factors. It is predictable and logical that the synergy that results when all these factors come together produces an environment which is more nurturing for students. Exactly how these factors interact to create this system is not clear at this time. What does appear to be clear in this study is that when these conditions are created, a synergy results which fosters the protective factors that promote resiliency; students who experience these factors are more likely to succeed and thrive in whatever life conditions they experience both in school and beyond.

The Theoretical Model

In the original proposal for this study, a nuclear model for these concepts was proposed (see Figure 2.3). It was posited that resiliency was the nucleus of the model, and the components of the student-centered middle school were the electrons revolving around the nucleus and creating a protective environment in which resiliency can develop. Student engagement was proposed as the energy which holds the model together, and the adult factors were forces acting upon the model to, either, help it hold together or split it apart.

As a result of this study, another factor has emerged which appears to permeate all other factors: empowerment of staff and students. Without empowerment, the various factors may not achieve the powerful synergy that results when all of the factors work together. A change in the model (see Figure 5.1.) is proposed which reflects this new role of empowerment. The student factors (resiliency and engagement) are placed in the center of the model. The student-centered middle school components revolve around the student forming a nurturing educational environment. Teacher readiness, teacher engagement, and principal leadership work together and act upon the components of the student-centered middle school and the student factors. Empowerment energizes the model.

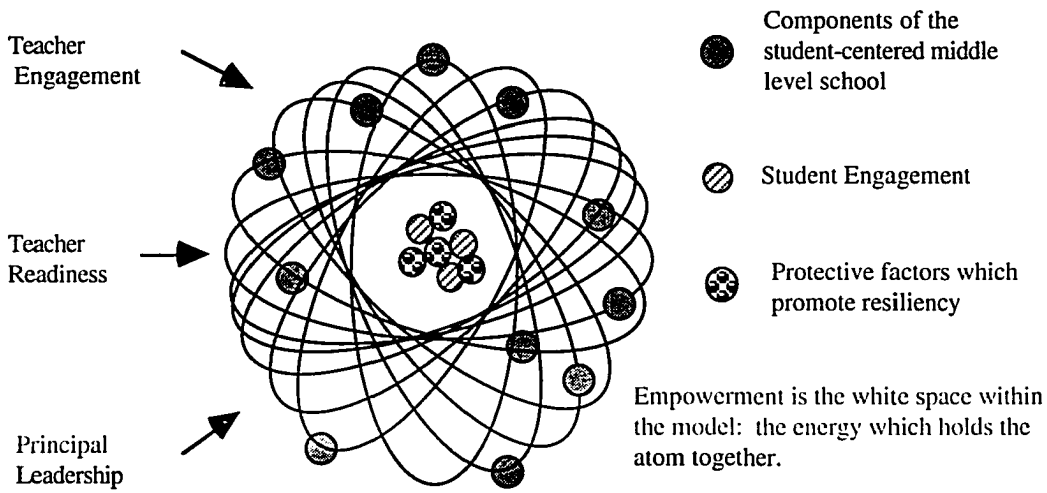


Figure 5.1. The theoretical framework depicting empowerment as the energy which synergizes the student-centered middle school, the adult influences, student engagement, and the protective factors which promote resiliency.

Synchronicity of the factors in the model suggests that if one element of any of the factors is weak or missing, the protective factors that promote resiliency are weakened. As any one element is strengthened, the protective factors are strengthened. As the various elements are strengthened, eventually a critical mass is reached and the model becomes systemic with each factor an integral part of the whole. Synergy comes from all the factors working together; when all factors are at their peak the model is so powerful that both students and staff experience a learning environment which protects them from adversity and promotes resiliency.

Limitations

The limitations of this study are inherent in the research design as well as implicit in the implementation of that design. The reader must consider these limitations within his/her own context when attempting to find application of these findings to other settings.

The research design was multiple case study methodology using qualitative interviews, observations, and artifact analysis along with quantitative surveys to inform and develop the rich description for the case study report. Limitations related to the research design include:

1. This research is a case study and the findings in these schools are not intended to be generalized to other settings.
2. Student engagement was measured using a self-report survey and perceptions of the teachers interviewed and the observers in the classroom. No attempt was made to directly measure the indicators of student engagement, such as portion of tasks completed, amount of time spent on academic work, intensity of student concentration, or degree of care shown in completing work.
3. A limited amount of time was available for the site visits and data collection process.
4. Neither the family/school relationship nor the community/school relationship were examined in this study. Both of these factors play a significant role in setting the context for the case study, and either may have impacted any of the factors of this study. Of

particular concern would be the impact of family or community culture on the readiness of teachers and on the engagement of students.

Recommendations for Further Research

Any research process provides insight into the methodology of the study in addition to providing insight into the theoretical constructs of the study. This study is no exception and further research with similar methodology can be informed by the conclusions of this study. Conclusions related to methodology are as follows:

1. It is necessary to establish the current status of the schools in a case study before the researcher can attempt to learn how the existing conditions came to be.
2. A complete and appropriate research design is imperative for case study research as the implementation of the research plan will inevitably not follow the design exactly.
3. Case study research designed to examine multiple factors within a school setting is most effectively accomplished through a team rather than a single researcher.
4. It is unnecessary to interview students individually in order to validate group interview data.

Perhaps the biggest learning from this research study is the importance of keeping the study manageable in scope. This applies both to the research setting and to the research questions. Case study research is particularly complex in design and implementation (Merriam, 1988; Yin, 1989). The researcher needs to know what the status of the factors being studied is before it is possible to learn how and why those conditions came to be. The researcher does not know the right questions to ask without complete information about the context and setting. Even with this foundation of information, the researcher is challenged to find the questions which will help the informants to reveal what they know about how the conditions came to be and why they have evolved to their current state.

The complexity of case study research contributes to the need for a solid research plan. Yin (1989) stresses the importance of the case study protocol in establishing the procedures and "general rules" that should be followed in the case study. This is particularly important when using multiple case study methodology to ensure consistency between the research process in the sites and, thus, "increase the reliability in case study research" (Yin, p.70). The protocol or research plan becomes the yardstick against which the necessary adjustments in the implementation process can be measured. As the researcher attempts to keep the implementation as close as possible to the research plan, the consistency across sites and the reliability of the research is maintained.

The research plan was invaluable in this study as acts of nature and other complications arose. Although the implementation was not identical in each school, the established goals and objectives of the original research plan allowed the process to be redesigned to maintain the original intent through different means. One example is the interviewing of the sixth grade students and the assistant principal of Morristown by telephone as scheduling problems prevented these interviews from taking place while the researcher was on-site. The integrity of the sample was maintained despite the change in procedure.

The complexity of case study also indicates that it is more effectively implemented by a team of researchers than by an individual researcher. Even with a narrow scope for the case study, the need to gain a holistic understanding of the setting and context of the research factors and the necessary triangulation of data suggest that the data collection process will be extensive and involved. Data analysis is also complex with qualitative data sources; more than one individual's perspective and insight into the data further informs the learning and understanding from the study. Both the increase in data collection personnel and the interaction among a variety of researchers contribute to a better study and stronger results.

A final learning related to the methodology of this study involves one specific data collection technique. The research design of this study included group interviews with

students in both schools. Because there was concern that the students might respond differently in the context of their peers than they would when confidentiality was ensured, it was decided that a sample of the group interview participants would be interviewed individually. Eleven students in Jamestown and nine in Morristown were interviewed. The individual interviews did not yield any contradictory or any new information that had not been provided through the group interviews. While this result does validate that the group interview data is accurate, it also indicates that it is an unnecessary expenditure of precious research time to interview the students individually.

Those researchers interested in further information regarding the roles and relationships between and among the school factors of the student-centered middle school, the adult factors of teacher engagement, teacher readiness, and principal leadership, and the student factors of engagement and resiliency will find many questions yet to be examined. This study has, as frequently happens with qualitative research, resulted in more questions than answers and offers the following recommendations for further research.

1. A deeper understanding of the relationships between and among the factors of this study would be achieved through a continuation of the study in Morristown with two purposes: 1) to determine how and why the existing conditions came to be; and 2) to examine the level of maintenance of these conditions over time.
2. Another study in Jamestown, as a follow-up to the planned transition to the middle school concept, would further define the findings of this study as well as provide important information regarding the transition process and the impact of the adult factors and student factors on that process.
3. Either as a component of the studies proposed above or as a separate study, an examination of the family and the community as factors within the model proposed in this study would provide further insight into the systemic nature of the child's environment and the school context.

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APPENDIX A. SITE PROPOSAL

Middle School Case Studies
Overview

The proposed case study will include two middle schools from the original research project aimed at enhancing success for rural Iowa secondary school students-at-risk. This research project is funded through a grant from the FINE Foundation and is coordinated and directed by Dr. Barbara Licklider, Educational Administration, Iowa State University.

The overall research project involves five studies. Study One describes the current status of rural Iowa programs for secondary school students at risk. Study Two examines the readiness of rural Iowa educators for meeting the needs of at risk students. Study Three is case study research of schools identified through the first two studies. Studies Four and Five involve the development and implementation of staff development designed to increase the readiness of rural Iowa educators to meet the needs of at risk students.

The case study research proposed for Morristown Middle School is a part of Study Three and is intended to further examine and expand upon the findings of Studies One and Two. Morristown Middle School was selected as a case study site because Studies One and Two revealed programming for at risk students that appears to be making a difference and a relatively high level of "readiness" on the part of the staff. This study will examine the middle school concept and structures, the concept of engagement of students and staff in the academic process, and resiliency in students.

Data collection techniques will include focus group interviews with students, individual interviews with students, individual interviews with staff, classroom observation, artifacts, and surveys of students and staff. The qualitative analysis of the data will involve content analysis of the interview, observation, and artifact data to identify themes and patterns. The survey data will be analyzed through statistical methodology.

The Morristown Middle School will receive a report which will include a description based on the interview, observations, and artifacts; an interpretation of the findings based on the theoretical framework of the study; and recommendations related to engagement and resiliency factors. In addition, the description and interpretation will become the basis for a dissertation and for journal articles in order to share the findings with others attempting to enhance the success of students in rural schools. The confidentiality of the schools and the participants will be respected and protected as much as possible throughout all reporting documents.

Questions, concerns, or comments related to this research proposal may be directed to Kay Forsythe (515-357-4207 - Home - or - 1-800-392-6640 - Work)

Middle School Case Studies
Morristown Middle School
Jamestown Middle School

Kay Forsythe
515-357-4207 (Home)
1-800-392-6640 (NTAEA)

Primary research question - To what extent do the structures of a transforming **middle school** increase **engagement** in the academic process and promote **resilience** in young adolescents?

General timeline

Minimum of 5 actual Days on-site in each school - 11 "person" days
- 2 days - Interviewing & Observing- January (3 people)
- 2 days - Interviewing & Observing - February (2 people)
- 1 day - Interviewing & Verifying - February/March (1 person)

Sources and Methods of Data Collection

Focus Group Interviewing with Students - Parent Informed Consent
- 5 - 10 students per group
- 45(?) minute interviews (class period timeframe)
- Groupings designed to encourage "safety" for the students to talk
- Cross-sectional sample of the student population across groups
- Data captured on newsprint by interviewer

Individual Interviewing with Students - Parent Informed Consent
- 10 - 12 individual interviews
- 30-45 minutes
- tape-recorded & transcribed
- cross-section of student population
- verification of focus group data

Individual Interviewing with Staff
- All interested and willing to be interviewed
- 30-45 minutes estimated - determined by interviewee
- tape-recorded & transcribed

Classroom observation - 2 days
- All interested and willing to be observed
- Single class period per teacher/subject

Artifacts - gathered by school staff and examined on researcher's time
- Student/Staff Handbooks
- School newsletters
- Staff development plans
- Curriculum
- Attendance/Discipline Data

Any other items deemed relevant by school staff

Survey related to Engagement - one-time administration by school staff
- Student survey - 50 items - Likert Scale response
- Staff survey

Survey related to Readiness - one-time administration to staff
- 35 items - 5-point Likert scale response

Data Analysis

Qualitative data (interviews/observations/artifacts) will be analyzed using content analysis techniques

Quantitative data (surveys) will be analyzed using appropriate statistical techniques

Reporting

Each case study school will receive a case analysis which includes:

A description based on the interviews and observations (This description will be verified for accuracy by persons at the school prior to any other release)

Interpretation of the findings based on the theoretical framework of the study

Recommendations related to engagement and resiliency factors will be made at the school's request.

Individual case studies and cross-case study analysis will become the Ph.D. dissertation of the researcher and will be shared with Iowa State University in that context. In addition, the dissertation will be shared with the traditional sources for dissertation research abstracts, etc.

Journal articles may also be written from the research and its findings. In addition to the researcher, Dr. Barbara Licklider may be authoring articles from this research project.

APPENDIX B. HUMAN SUBJECTS APPROVAL

Information for Review of Research Involving Human Subjects

Iowa State University 316

(Please type and use the attached instructions for completing this form)

1. Title of Project The influence of the student-centered middle level school on resilience, engagement, and readiness: A case study of two middle level schools in rural Iowa.

2. I agree to provide the proper surveillance of this project to insure that the rights and welfare of the human subjects are protected. I will report any adverse reactions to the committee. Additions to or changes in research procedures after the project has been approved will be submitted to the committee for review. I agree to request renewal of approval for any project continuing more than one year.

L. Kay Forsythe	1/31/94	L. Kay Forsythe
Typed Name of Principal Investigator	Date	Signature of Principal Investigator

Professional Studies in Education	1108 First Avenue North Clear Lake, Iowa 50428	515/357-4207
Department	Campus Address	Campus Telephone

3. Signatures of other investigators

	Date	Relationship to Principal Investigator
		Major Professor

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4. Principal Investigator(s) (check all that apply)
☐ Faculty ☐ Staff ☒ Graduate Student ☐ Undergraduate Student

5. Project (check all that apply)
☒ Research ☒ Thesis or dissertation ☐ Class project ☐ Independent Study (490, 590, Honors project)

6. Number of subjects (complete all that apply)
140 # Adults, non-students ___ # ISU student 900 # minors under 14 ___ # minors 14 - 17 ___ other (explain)

7. Brief description of proposed research involving human subjects: (See instructions, Item 7. Use an additional page if needed.)

See attached.

(Please do not send research, thesis, or dissertation proposals.)

8. Informed Consent:
☒ Signed informed consent will be obtained. (Attach a copy of your form.)
☒ Modified informed consent will be obtained. (See instructions, item 8.)
☐ Not applicable to this project.

See attached explanation.

7. The **primary purpose of this study** is to examine the influences and interactions of the student-centered middle school, resilience, engagement, and readiness in two middle level schools. A case study of each school will provide a profile of the existing middle level school programs, practices, and policies; the level of engagement of students and staff; the existence and effectiveness of protective factors which promote resilience, and the level of teacher readiness to meet the needs of all students.

   Qualitative data gathering will involve individual interviews with school staff, group and individual interviews with students, observation of classrooms, and examination of artifacts. The data will be in the form of transcripts of tape-recorded individual interviews; transcripts of data on newsprint from group interviews, transcripts of scripted notes from observations, and notes from examination of artifacts. The interview schedules for the staff and the student interviews are included in the addenda.

   Quantitative data gathering will involve two paper-and-pencil surveys for school staff and one paper-and-pencil survey for students. The Teacher Readiness Survey and Student Engagement Survey are included in the addenda. The Teacher Engagement Survey is being obtained from its original authors/researchers at the Center for Effective Secondary Schools, University of Wisconsin, Madison; sample items from this instrument are included in the addenda. This instrument will be submitted for approval when available.

   The two schools in this study were selected as a result of their participation in a previous study in which they were identified as having the organizational characteristics desired for this study. The staff of each school are all invited to participate in interviews on a voluntary basis; all are invited to complete the surveys; and observations are based on a "typical" student schedule for each grade level with permission for individual teachers to opt out of being observed. All students in each school will have the opportunity to complete the student engagement survey; students for group interviews are selected through a modified random selection with a representative cross-section of the student population for each grade; students for the individual interviews will be volunteers from the group interviews.

   There are no specific incentives or compensations offered to participants beyond the reports of the research project.

8. **Signed informed consent** will be obtained from the staff participating in individual interviews. The consent form is included in the addenda.

   Modified informed consent for the staff completing the surveys will be implicit in the completion of the instrument as the opportunity to return the survey uncompleted is available to all participants.

   Modified informed consent for the observations will be implicit in the permission by the teacher for the observer to be present in the classroom. Participation is voluntary and teachers may request that the observer not be present in the classroom.

   Modified informed consent will be obtained for the students participating in the project. A parent letter will be sent to all parents of the students with the option to opt their student out of the project by calling the school or returning a form attached to the letter. This letter is included in the addenda.

   Modified informed consent of the students to participate in the survey and/or interviews will be implicit in completion of the survey or presence at the interview. In addition, the group interviews will not be tape-recorded and the data collection will be on newsprint in full view of the students. Corrections and clarifications of the data will be encouraged throughout the interview.

9. Confidentiality of Data: Describe below the methods to be used to ensure the confidentiality of data obtained. (See instructions, item 9.)
Names of individuals will not be attached to any data from this study. The last four digits of the social security number will be used to combine and compare the scores from the two staff surveys. Audio-tapes will be numbered for identification of transcripts. Data from group interviews will not identify individual students within the group. There is a possibility that individuals may be identified by their role in the school (such as the only At-Risk Coordinator); this will be explained and reports will avoid the use of such identifiers if possible. When such identifiers are necessary to the accurate and complete reporting of the data, the individual will be given the opportunity to review the report prior to publication.

10. What risks or discomfort will be part of the study? Will subjects in the research be placed at risk or incur discomfort? Describe any risks to the subjects and precautions that will be taken to minimize them. (The concept of risk goes beyond physical risk and includes risks to subjects' dignity and self-respect as well as psychological or emotional risk. See instructions, item 10.)
There are no physical risks in this study. There should not be any risk to subjects' dignity and self-respect as all interviews will be conducted with considerable attention to the dignity and respect of each individual.

11. CHECK ALL of the following that apply to your research:
- ☐ A. Medical clearance necessary before subjects can participate
- ☐ B. Samples (Blood, tissue, etc.) from subjects
- ☐ C. Administration of substances (foods, drugs, etc.) to subjects
- ☐ D. Physical exercise or conditioning for subjects
- ☐ E. Deception of subjects
- ☒ F. Subjects under 14 years of age and/or ☒ Subjects 14 - 17 years of age
- ☐ G. Subjects in institutions (nursing homes, prisons, etc.)
- ☒ H. Research must be approved by another institution or agency (Attach letters of approval)

If you checked any of the items in 11, please complete the following in the space below (include any attachments):

Items A - D Describe the procedures and note the safety precautions being taken.

Item E Describe how subjects will be deceived; justify the deception; indicate the debriefing procedure, including the timing and information to be presented to subjects.

Item F For subjects under the age of 14, indicate how informed consent from parents or legally authorized representatives as well as from subjects will be obtained.

Items G & H Specify the agency or institution that must approve the project. If subjects in any outside agency or institution are involved, approval must be obtained prior to beginning the research, and the letter of approval should be filed.

Item F. See attached information under 8. Informed consent. Parent consent letter and form are included in the addenda.

Item H. Letters of permission for the study are included from both Riverbend Middle School and Estherville Middle School.

Checklist for Attachments and Time Schedule

The following are attached (please check):

12. [X] Letter or written statement to subjects indicating clearly:
    a) purpose of the research
    b) the use of any identifier codes (names, #'s), how they will be used, and when they will be removed (see Item 17)
    c) an estimate of time needed for participation in the research and the place
    d) if applicable, location of the research activity
    e) how you will ensure confidentiality
    f) in a longitudinal study, note when and how you will contact subjects later
    g) participation is voluntary; nonparticipation will not affect evaluations of the subject

13. [X] Consent form (if applicable)

14. [X] Letter of approval for research from cooperating organizations or institutions (if applicable)

15. [X] Data-gathering instruments

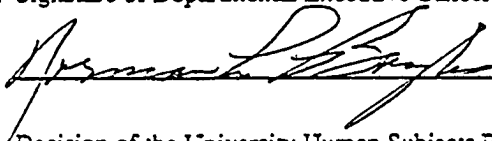
16. Anticipated dates for contact with subjects:

First Contact	Last Contact
February 2, 1994	May 13, 1994
Month / Day / Year	Month / Day / Year

17. If applicable: anticipated date that identifiers will be removed from completed survey instruments and/or audio or visual tapes will be erased:

December 31, 1994
Month / Day / Year

18. Signature of Departmental Executive Officer | Date | Department or Administrative Unit

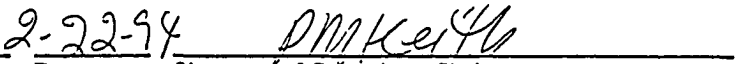


2/2/94

Professional Studies in Education

19. Decision of the University Human Subjects Review Committee:

[X] Project Approved [ ] Project Not Approved [ ] No Action Required

Patricia M. Keith | 2-22-94 | 

Name of Committee Chairperson | Date | Signature of Committee Chairperson

STATEMENT OF INFORMED CONSENT

This form is to be read by each school staff member being interviewed as a part of this study, prior to the beginning of the interview; any questions or clarifications are to be explained; and both the participant and the interviewer will sign.

Explanation of the Study
This study is a follow-up to the Iowa State University/FINE Foundation study of at risk programs in rural schools in which Jamestown Middle School participated in 1991-1992. It is a case study of two middle schools to explore the relationship between the structures of the middle school and factors promoting resiliency and student engagement for at-risk students. A variety of sources of information(data) will be used in the study with interviews of school staff being one of the primary sources of information. Topics for the interview will include but are not limited to your perception of and experience with middle school programs, policies, and practices; the risk and protective factors for at-risk students; the cultural values and beliefs of the school; practices and indicators of student engagement; and relationships among staff, students, parents, and the community.

Parameters of the Interview
Interviews will be conducted at a time and place agreeable and convenient for you. It is anticipated that the interview will take approximately 45 minutes. With your permission the interview will be tape recorded, and the tape will then be transcribed. No one else will have access to the tape recording which will be destroyed at the conclusion of the study. The transcript will be identified by a number, and your identity will be confidential and protected information. You may decline to answer any question(s) during the interview process, may request that the tape recorder be turned off at any point, and may withdraw from participation in the study at any time. Withdrawal will include the deletion of any prior information from the final report of the study. Either this interviewer or another researcher may return after the initial interview in order to ask you for clarification of a response or to ask a question that becomes relevant as the result of an interview with another participant in the study.

The results of this study will be shared with the participants. The report will be written in generic terms and will not include specific information which would identify any individual unless permission to do so has been granted, in writing. Written documents that might result from this study include case study reports to the participating schools, a doctoral dissertation, and journal articles.

Questions related to this study can be directed to Kay Forsythe at any time during the process at 1-800-392-6640 or at home at 357-4207.

I have read and understand the purpose and the parameters of this study. I freely consent to participate in the study and to be interviewed. I understand that I may withdraw at any time.

Signature of Participant	Signature of Interviewer
Date	Date

January 10, 1994

Dear Parents,

Jamestown Middle School has been invited to participate in a study being supported by Iowa State University and the FINE Foundation. This research study is a follow-up to a study done in 1992 in which our school was identified as having a staff which shows high readiness to meet the needs of all students in the classroom and as having programming for at-risk students beyond what other schools offer.

The study being done at this time will be examining the programs, policies, and practices of the middle school as they relate to student engagement in the educational process and to risk factors and protective factors for at risk students. The students at Jamestown Middle School may be involved in this study in three ways.

- 1) Students will have the opportunity to complete a paper-and-pencil survey to identify the level of student engagement in our school. This survey will ask students to indicate whether they agree or disagree with statements about this school such as "The purpose of this school is to help students learn." and "Teachers treat me with respect." Student names will not be used on these surveys, and individual students will not be able to be identified.

- 2) Students may be invited to participate in group discussions about their experiences as students in this school. Typical questions during the group interview might be "How do teachers help you succeed?" or "What opportunities to participate do you have in this school?" The students' responses during the group interviews will be recorded on newsprint. Students will have the opportunity during the interview to make sure that what is recorded is accurate, and individual students will **not** be identified on the newsprint.

- 3) A few students will be invited to be interviewed individually with the questions related to the topics from the discussion groups. These interviews will be tape-recorded and transcribed (Word for word written documents of both the interviewer questions and the student participant responses). Names of students interviewed will not be included and individual transcriptions will be identified only by a number.

All Jamestown Middle School students will have the opportunity to participate in this study, unless parents or students indicate they do not wish to participate. If you do not want your middle school student to participate in the study, please call the school office or return the attached form by January 21, 1994. **If you do not call or return the form, your student will be allowed to participate in the study.**

If you have questions concerning the study, please call Kay Forsythe, Principal Researcher, at 515-357-4207, or contact the school office.

Sincerely,

Principal

Parent Consent Form
Jamestown Middle School

Research study - Iowa State University/FINE Foundation
Middle Schools, Risk and Protective Factors, and Student Engagement

Please note that you do not need to return this form unless you do not want your student to participate in the research study.

_____ I do not want my student to participate in the written survey.

_____ I do not want my student to participate in the group discussion interviews.

_____ I do not want my student to participate in an individual student interview.

Student Name_____

APPENDIX C. INTERVIEW SCHEDULES

STUDENT INTERVIEW SCHEDULE

Background - Group interviews will begin with an explanation of what we are doing followed by a go'round to introduce the students to the process

Go'round - Name and what you think is the best thing about your school.

Middle School

Describe a regular school day in this school.
What do you tell your parents about school?
If a new student came to your school, what would happen to them?
What would you tell a new student in your school?
How do the teachers teach in your classes?
What would you change about your school, if you could?
What would you not want to change about your school?
How are you assigned to your classes?
What classes does everyone take?
What classes do you choose to take?
How does your Homebase work?

Engagement

What is it like to go to school here?
What is this school trying to do for you?
What is the purpose of this school?
How do people in this school treat each other?
How fair are the rules of this school?
What is it like to learn in your classes?
How do you have fun in this school?
What is interesting about this school?
How do you know when you have done something well?
How do you know when you have done something wrong?
Who decides what you will do in your classes?
Who decides what you will do for other activities?

Resilience

How do you know that the teachers care about you?
How do you know that you are important?
How do you know what you are supposed to do?
What things do you do in school that make a difference for you?
What things do you do in school that make a difference for someone else?
What opportunities for participation do you have?
When you have trouble learning something, what happens?
When things go wrong for you, what do you do?

What have I not asked you that I should have asked?

TEACHER INTERVIEW SCHEDULE

Background Information

How long have you taught in this school?
How long have you been teaching?
What is your educational background?
What is your teaching assignment?
How does this school compare to other schools where you have taught?

Middle School

What is it like to teach in this school?
How is student progress measured?
What is the curriculum of the school? of your classes?
How does the Homebase program work?
How does the schedule of the school work?
How are students and teachers assigned to classes?
What other programs or services are available for students?
What extra-curricular activities are available for students?
What is your relationship with the parents of your students?
What classes or inservices have you had that focused on middle level age students?

Student Engagement and Resilience

How would you describe the students in this school?
How do students know what is expected of them?
How involved are your students with their work in the classroom?
What is the relationship between students and teachers?
How do students interact with each other?
What opportunities for participation and/or to make a contribution are available to students?

Staff Engagement and Readiness

What opportunities for staff development have you taken advantage of?
What staff development opportunities has the school made available for you?
What opportunities for interaction among staff are there?
How do people in this school treat each other?
How does your principal support your work?
How do you know what is expected of you?
How are decisions made in this school?
How do you know that you are making a difference?
What is the purpose or mission of this school?

What have I not asked that is important for us to know?

PRINCIPAL INTERVIEW SCHEDULE

Background Information

How long have you been in this school?
How long have you been teaching?
What is your educational background?
How does this school compare to other schools where you have worked?

Middle School

What is the curriculum of the school?
How does the schedule of the school work?
How are students and teachers assigned to classes?
What other programs or services are available for students?
What extra-curricular activities are available for students?
What is your relationship with the parents of your students?
What classes or inservices have you had that focused on middle level age students?
What would you like to see for your school?

Student Engagement and Resilience

How would you describe the students in this school?
How do students know what is expected of them?
How involved are your students with their work in the classroom?
What is the relationship between students and teachers?
How do students interact with each other?
What opportunities for participation and/or to make a contribution are available to students?

Staff Engagement and Readiness

What opportunities for staff development are available to staff?
What staff development opportunities has the school made available for you?
What opportunities for interaction among staff are there?
How do people in this school treat each other?
How do your support your teachers in their work?
How are decisions made in this school?
How do you know that you are making a difference?
What is the purpose or mission of this school?
How would you describe your role as principal?
How would you describe the teachers in your school?
What is a typical day like for you?

What have I not asked that is important for us to know?

APPENDIX D. SURVEYS

Partners in Education

Student Survey

Middle Level

Your opinions are important. Please tell us about your school and how things are going for you. No one will know how you answered these questions. Do not place your name on the survey.

We want to know how much you agree or disagree with statements in this survey. When answering these questions, think in terms of "most of the time," "most of the teachers," or "most of the students."

On the survey, circle the answer that reflects your opinion according to the following scale.

1	2	3	4	5	NA
strongly disagree	disagree	neutral	agree	strongly agree	Does not apply

Example: My classes are interesting. 1 2 3 4 5 NA

If the student SOMEWHAT AGREES, the 3 is circled.

1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree	NA Does not Apply

1.	I do my best to learn in school.	1	2	3	4	5	NA
2.	I concentrate on what is being taught during class.	1	2	3	4	5	NA
3.	I complete school assignments on time.	1	2	3	4	5	NA
4.	I do my school work to learn.	1	2	3	4	5	NA
5.	I take pride in doing my school work.	1	2	3	4	5	NA
6.	The purpose of this school is to help students learn.	1	2	3	4	5	NA
7.	Teachers treat students fairly.	1	2	3	4	5	NA
8.	The school principal(s) treat students fairly.	1	2	3	4	5	NA
9.	Adults in this school listen to the student's side of the story.	1	2	3	4	5	NA
10.	The school provides enough opportunities for me to participate in clubs, sports, music, etc.	1	2	3	4	5	NA
11.	Teachers will help me when I am having problems in class or with an assignment.	1	2	3	4	5	NA
12.	Teachers and other adults in this school will help you deal with home or personal problems.	1	2	3	4	5	NA
13.	The counselors in this school are helpful.	1	2	3	4	5	NA
14.	I understand the school rules.	1	2	3	4	5	NA
15.	The rules in the school are fair.	1	2	3	4	5	NA
16.	Rules are enforced fairly in this school.	1	2	3	4	5	NA
17.	Teachers treat me with respect.	1	2	3	4	5	NA
18.	My teachers care about me.	1	2	3	4	5	NA
19.	In this school you are treated like you are important.	1	2	3	4	5	NA
20.	Teachers reward you for giving your best effort.	1	2	3	4	5	NA
21.	I am praised in class when I do something well.	1	2	3	4	5	NA
22.	This school recognizes and rewards student accomplishments.	1	2	3	4	5	NA
23.	In this school the grades students receive are based on how well they perform.	1	2	3	4	5	NA

1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree	NA Does not Apply

24. What I am learning in school is interesting.	1	2	3	4	5	NA
25. Teachers make learning interesting.	1	2	3	4	5	NA
26. There are enough opportunities for students to work together in this school.	1	2	3	4	5	NA
27. Teachers let me know how well I am doing.	1	2	3	4	5	NA
28. Teachers return my work with written comments and ways to improve.	1	2	3	4	5	NA
29. Teachers do their best to help you be responsible for your work.	1	2	3	4	5	NA
30. This school provides opportunities for students to have fun.	1	2	3	4	5	NA
31. Teachers try to make learning enjoyable.	1	2	3	4	5	NA
32. I have enough say in deciding <u>what</u> I should learn.	1	2	3	4	5	NA
33. I have enough say in deciding <u>how</u> I should learn.	1	2	3	4	5	NA
34. What I am learning in school is important to me.	1	2	3	4	5	NA
35. Things that I learn in school are useful to me now.	1	2	3	4	5	NA
36. I believe this school prepares students to be successful in the future.	1	2	3	4	5	NA
37. Students help each other succeed in school.	1	2	3	4	5	NA
38. Students in this school treat other students with respect.	1	2	3	4	5	NA
39. I look forward to coming to school each day.	1	2	3	4	5	NA
40. I am proud of this school.	1	2	3	4	5	NA
41. I feel safe in this school.	1	2	3	4	5	NA
42. If I study and work hard, I will be successful in school.	1	2	3	4	5	NA
43. If I study and work hard, it will make a difference in my life.	1	2	3	4	5	NA
44. Teachers give too much homework.	1	2	3	4	5	NA
45. I have friends in this school.	1	2	3	4	5	NA
46. There are things that happen in my life outside of school that make it hard for me to learn in school.	1	2	3	4	5	NA

Now, we would like to know a little about you. Please fill in or place a check (√) in the blank which applies to you. Your answers will be kept private.
DO NOT PUT YOUR NAME ON THIS SURVEY.

School:_____ Sex: Male_____ Female_____

Grade: 4_____ 5_____ 6_____ 7_____ 8_____

AGE: 10___ 11___ 12___ 13___ 14___ 15___

School activities you participate in: _____Sports

_____Vocal Music

_____Instrumental Music

_____Other clubs

_____Other_____

Are you eligible for free or reduced lunch? _____Yes _____No

Special school programs you attend: _____Chapter 1

_____Special Education

_____At-risk program

_____Talented and Gifted

_____Other_____

Grades you usually earn: _____Mostly A's and B's

_____Mostly B's and C's

_____Mostly C's and D's

_____Mostly D's and F's

Teacher Questionnaire

Study of School Structures and Teachers' Work

The purpose of this survey is to learn about teachers' perceptions of their work environment and their engagement in the processes of education. Most of the questions ask for your opinions about your work; there are no right or wrong answers. Your responses will be kept strictly confidential. This survey will be destroyed after the data has been entered into the computer for analysis.

Please put the last four digits of your Social Security number in the box at the right . This number will also be written on the Teacher Readiness Survey which is being used in this research project. In order to compare the scores on these instruments, we must be able to connect your individual scores on each survey. This number allows us to do that without attaching your name or any other identifiers to your answers.

When you have completed the surveys, please place them in the envelope provided and seal the envelope. Return the sealed envelope to the school office with no identifier on the outside of the envelope.

Following are a number of statements relating to various aspects of the school structures and teacher engagement in the education process.

Indicate, by circling the appropriate number in the column to the right of the statements, the degree to which you agree or disagree with the statement.

The scale to be used is as follows:

1	2	3	4	5	NA
strongly disagree	disagree	neutral	agree	strongly agree	not applicable

1 strongly disagree	2 disagree	3 neutral	4 agree	5 strongly agree	NA not applicable

1.	An adequate work space where I can concentrate is available.	1	2	3	4	5	NA
2.	The amount of student tardiness and class cutting in this school interferes with my teaching.	1	2	3	4	5	NA
3.	I worry about my personal safety while in school.	1	2	3	4	5	NA
4.	My professional workload is fair and reasonable.	1	2	3	4	5	NA
5.	I try to avoid getting involved in students' personal concerns.	1	2	3	4	5	NA
6.	I frequently take on extra tasks or responsibilities that I think will benefit the school.	1	2	3	4	5	NA
7.	My success or failure in teaching students is due primarily to factors beyond my control rather than to my own effort and ability.	1	2	3	4	5	NA
8.	The level of student misbehavior (e.g., noise, horseplay or fighting in the halls, cafeteria or student lounge) and/or drug or alcohol use in this school interferes with my teaching.	1	2	3	4	5	NA
9.	Many of the students I teach are not capable of learning the material I am supposed to teach them.	1	2	3	4	5	NA
10.	Necessary materials (e.g., textbooks, supplies, copy machines) are readily available as needed by the staff.	1	2	3	4	5	NA
11.	I wouldn't want to work in any other school.	1	2	3	4	5	NA
12.	The reputation and performance of this school is important to me.	1	2	3	4	5	NA
13.	I sometimes feel it is a waste of time to try to do my best as a teacher.	1	2	3	4	5	NA
14.	I try very hard to show my students that I care about them.	1	2	3	4	5	NA
15.	Students who work hard and do well deserve more of my time than those who do not.	1	2	3	4	5	NA
16.	It's important for me to know something about my students' families.	1	2	3	4	5	NA
17.	I try to make myself accessible to students even if it means meeting with them before or after school, during my prep or free period, etc.	1	2	3	4	5	NA

1 strongly disagree	2 disagree	3 neutral	4 agree	5 strongly agree	NA not applicable

18. If I had to choose, I would emphasize learning subject matter content over personal growth for my students. 1 2 3 4 5 NA

19. It is important that as teachers we try to insure that all students master basic skills and subject matter course work. 1 2 3 4 5 NA

20. I am always thinking about ways of improving my courses. 1 2 3 4 5 NA

21. It is possible to successfully teach my subject without being an expert in the field. 1 2 3 4 5 NA

22. My expectations about how much students should learn are not as high as they used to be. 1 2 3 4 5 NA

23. Interdisciplinary classes benefit teachers as well as students. 1 2 3 4 5 NA

24. Given the opportunity, I would take additional college or university courses in the subject area I teach most often. 1 2 3 4 5 NA

25. If I could do it over, I would much rather teacher another subject than the one I teach now. 1 2 3 4 5 NA

26. The attitudes and habits my students bring to class greatly reduce their chances for academic success. 1 2 3 4 5 NA

27. This school seems like a big family; everyone is so close and cordial. 1 2 3 4 5 NA

28. Teachers in my school have enough authority to do the work that is expected of them. 1 2 3 4 5 NA

29. Staff members are recognized for a job well done. 1 2 3 4 5 NA

30. The school administration's behavior toward the staff is supportive and encouraging. 1 2 3 4 5 NA

31. Staff members support and encourage each other. 1 2 3 4 5 NA

32. I feel accepted and respected as a colleague by most staff members. 1 2 3 4 5 NA

33. Most of the inservice programs I attended the past school (92/93) dealt with issues specific to the needs and concerns of this school's students and staff. 1 2 3 4 5 NA

34. The principal is interested in innovation and new ideas. 1 2 3 4 5 NA

35. Teachers in this school are continually learning and seeking new ideas. 1 2 3 4 5 NA

36. Staff development programs in this school permit me to acquire important new knowledge and skills. 1 2 3 4 5 NA

1 strongly disagree	2 disagree	3 neutral	4 agree	5 strongly agree	NA not applicable

37. I have an opportunity to develop my special abilities. 1 2 3 4 5 NA

38. I rarely find my job challenging. 1 2 3 4 5 NA

39. In this school I am seldom encouraged to experiment with my teaching. 1 2 3 4 5 NA

40. The same, small group of people sits on most of the active committees and is involved in most of the new projects and programs here. 1 2 3 4 5 NA

41. Too often, decisions made by staff committees are ignored or reversed by building administrators. 1 2 3 4 5 NA

42. Too often, decisions made by building staff are ignored or reversed by central office administrators. 1 2 3 4 5 NA

43. I make a conscious effort to coordinate the content of my courses with other teachers. 1 2 3 4 5 NA

44. We solve problems; we don't just talk about them. 1 2 3 4 5 NA

45. I support the disciplinary standards and practices of this school. 1 2 3 4 5 NA

46. This school promotes social and/or moral values I think are important. 1 2 3 4 5 NA

47. The way I conduct my classes is consistent with the educational goals and objectives of my school. 1 2 3 4 5 NA

48. Most of my colleagues share my beliefs and values about what the central mission of this school should be. 1 2 3 4 5 NA

49. The principal of this school treats teachers as professional workers. 1 2 3 4 5 NA

50. The principal of this school gives teachers the feeling that their work is an "important" activity. 1 2 3 4 5 NA

READINESS FOR MEETING THE NEEDS OF STUDENTS AT RISK

The purpose of this instrument is to ascertain the level of readiness of teachers in your building to better meet the needs of students at risk of school failure or at risk of limited life options due to undereducation. As you respond to the items on this instrument and encounter the phrases **at-risk student** or **students at risk**, please respond to the items using the Iowa Department of Education definition of an at-risk student :

> "...anyone having difficulty mastering language, academic, cultural, and social skills necessary to reach the educational levels he/she is capable of."

Given today's society, that definition could include nearly any student at some time of his/her schooling. As you consider items on this instrument, please consider the students in your regular education classes. Any time the phrase, **all students,** is used, it refers to all students in your regular education classes including special education students who are mildly disabled such as those classified learning disabled (LD). **Please do not consider students such as the severely behaviorally disabled nor the severely mentally disabled when responding to items on the instrument.**

Following are a number of statements relating to various aspects of teacher readiness for achieving even more success with students at risk.

Indicate, by circling the appropriate number in the column to the right of the statements, the degree to which you agree or disagree with the statement.

The scale to be used is as follows:

1	2	3	4	5	NA
strongly disagree	disagree	neutral	agree	strongly agree	not applicable

1 strongly disagree	2 disagree	3 neutral	4 agree	5 strongly agree	NA not applicable

1.	I know the life circumstances that put students at risk.	1	2	3	4	5	NA		
2.	I can recognize the life circumstances that put students at risk.	1	2	3	4	5	NA		
3.	I know behaviors students choose that put them at risk.	1	2	3	4	5	NA		
4.	I can recognize student behaviors that put them at risk.	1	2	3	4	5	NA		
5.	I know how to help students overcome the life home situations that put them at risk.	1	2	3	4	5	NA		
6.	I know how to effectively teach at-risk students.	1	2	3	4	5	NA		
7.	The training and preparation I received prepared me to deal with students who have low motivation or history of behavior problems in school.	1	2	3	4	5	NA		
8.	The number of students with characteristics that impede learning has increased over the past five or ten years.	1	2	3	4	5	NA		
9.	Students at risk of school failure or limited life opportunities due to undereducation is a major national problem.	1	2	3	4	5	NA		
10.	The long-term cost of students dropping out of school far exceeds the cost of meeting the students' current needs so that they can continue their educations.	1	2	3	4	5	NA		
11.	Students at risk of school failure or limited life opportunities due to undereducation is a problem in our district.	1	2	3	4	5	NA		
12.	It is my obligation to help every one of my students achieve.	1	2	3	4	5	NA		
13.	I need to do more to address the needs of students at risk.	1	2	3	4	5	NA		
14.	It is part of my responsibility to keep students from dropping out of school.	1	2	3	4	5	NA		
15.	I can be counted on to help students achieve, even though it may not be part of my official assignment, increases my workload, or causes me inconvenience .	1	2	3	4	5	NA		
16.	I need to **change my professional practices** as the needs of students in my school change.	1	2	3	4	5	NA		
17.	I am willing to **collaborate** with administrators and other teachers to make changes where necessary to better meet the educational needs of students.	1	2	3	4	5	NA		

18.	I am willing to learn more about **what puts students at risk** of school failure or undereducation.	1	2	3	4	5	NA
19.	I am willing to learn more about teaching **strategies and approaches** make changes where necessary to better meet the educational needs of students.	1	2	3	4	5	NA
20.	I am willing to examine my **teaching methods** and make changes where necessary to better meet the educational needs of students.	1	2	3	4	5	NA
21.	I am willing to examine **course content** and make changes where necessary to better meet the educational needs of students.	1	2	3	4	5	NA
22.	I am willing to **individualize instruction** to better meet the educational needs of students.	1	2	3	4	5	NA
23.	I am willing to examine **assignments** I give and make changes where necessary to better meet the educational needs of students.	1	2	3	4	5	NA
24.	I am willing to learn more about **parental and community involvement** and make changes to help meet the educational needs of students.	1	2	3	4	5	NA
25.	Educating **all** students should be a primary focus of the district.	1	2	3	4	5	NA
26.	I assume every student is capable of learning, given appropriate conditions.	1	2	3	4	5	NA
27.	I want to have students at risk remain in my classes rather than suspending them or sending them to another program so that I can help them increase their achievement.	1	2	3	4	5	NA
28.	When it comes right down to it, a teacher can't do much because a student's motivation and performance depends primarily on his/her home situation.	1	2	3	4	5	NA
29.	Teachers can help most students overcome the home life circumstances that put them at risk.	1	2	3	4	5	NA
30.	I am certain that I can make a difference in the lives of my students.	1	2	3	4	5	NA
31.	If I make a sincere effort, I can get through to even the most difficult or unmotivated students.	1	2	3	4	5	NA
32.	I have confidence in myself as a teacher when my students have low motivation or have a history of behavior problems.	1	2	3	4	5	NA
33.	I am effective in persuading students that they can be successful in school.	1	2	3	4	5	NA

Finally, we will need some information about you. Please put the last four digits of your Social Security number in the box at the right. This number will also be written on the Teacher Engagement Survey which is being used in this research project. In order to compare the scores on these instruments, we must be able to connect your individual scores on each survey. This number allows us to do that without attaching your name or any other identifiers to your answers.

1. School address: _____

2. Position:
_____ teacher
_____ principal
_____ counselor
_____ other (please specify): _____

3. Grade level(s) teaching or supervising:
_____ 4
_____ 5
_____ 6
_____ 7
_____ 8

5. Subjects teaching, supervising, or last taught when a teacher:
_____ self contained elementary
_____ music
_____ physical education
_____ art
_____ special education
_____ home economics
_____ other (please specify): _____
_____ math
_____ science
_____ language arts
_____ social studies
_____ industrial arts
_____ business

6. Previous staff development/training directly related to working with students at risk:
_____ none
_____ 1-3 hours
_____ 4-6 hours
_____ 7-15 hours
_____ 16-30 hours
_____ 31 or more hours

7. Gender: _____ male _____ female

8. Age:
____ 21-25
____ 26-30
____ 31-40
____ 41-50
____ 51-55
____ 56-60
____ 62 or older

9. Years of teaching:
____ 1-3
____ 4-10
____ 11-20
____ 21-30
____ 31 or more

10. Education:
____ Bachelor's
____ BS+1-15
____ BS+15-30
____ Master's
____ Master's +
____ Ph.D.

11. Please respond to the following statement by circling the appropriate number:

	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
Overall, how do you feel about your job--the things you actually do at school?	1	2	3	4	5

APPENDIX E. FREQUENCY DISTRIBUTIONS

Frequency Distributions for Student Engagement Survey,
Teacher Engagement Survey, and Teacher Readiness Survey

Table E.1. Student Engagement item means, standard deviations, and percents of disagree, uncertain, and agree for Morristown Middle School.

FACTOR/ITEM	Mean	S.D.	% Disagree	% Uncertain	% Agree
Engagement					
1. I do my best to learn in school.	4.18	.89	4.0	14.9	80.8
2. I concentrate on what is being taught during class.	3.71	.82	4.9	30.7	64.1
3. I complete school assignments on time.	3.82	1.01	7.8	30.1	62.0
4. I do my school work to learn.	3.85	1.01	9.1	23.0	67.7
5. I take pride in doing my school work.	3.61	1.05	13.0	29.5	57.4
Membership					
6. The purpose of this school is to help students learn.	4.39	.79	1.6	11.3	86.8
7. Teachers treat students fairly.	3.50	1.14	16.9	27.1	55.9
8. The school principal(s) treat students fairly.	3.80	1.06	9.7	24.6	65.5
9. Adults in this school listen to the student's side of the story.	3.22	1.12	23.4	32.4	44.1
10. The school provides enough opportunities for me to participate in clubs, sports, music, etc.	4.12	1.04	8.1	11.7	80.1
11. Teachers will help me when I am having problems in class or with an assignment.	3.97	1.00	8.2	17.6	74.0
12. Teachers and other adults in this school will help you deal with home or personal problems.	3.48	1.11	16.9	30.2	52.7
13. The counselors in this school are helpful.	3.66	1.16	15.5	23.5	60.7
14. I understand the school rules.	4.12	.96	6.9	12.0	80.9
15. The rules in the school are fair.	3.55	1.14	16.3	26.3	57.2
16. Rules are enforced fairly in this school.	3.57	1.05	13.5	30.3	56.1
17. Teachers treat me with respect.	3.74	1.07	10.9	22.9	66.0
18. My teachers care about me.	3.66	1.01	8.4	33.1	58.2
19. In this school you are treated like you are important.	3.39	1.08	17.4	32.3	49.0

FACTOR/ITEM	Mean	S.D.	% Disagree	% Uncertain	% Agree
Authentic Work					
20. Teachers reward you for giving your best effort.	3.35	1.19	21.9	29.7	48.3
21. I am praised in class when I do something well.	3.29	1.12	22.0	33.5	44.2
22. This school recognizes and rewards student accomplishments.	3.72	1.03	9.6	28.5	51.8
23. In this school the grades students receive are based on how well they perform.	3.66	1.07	10.7	32.2	57.0
24. What I am learning in school is interesting.	3.23	1.15	22.3	32.2	45.3
25. Teachers make learning interesting.	3.25	1.11	21.6	37.2	40.9
26. There are enough opportunities for students to work together in this school.	3.53	1.09	16.0	26.9	56.8
27. Teachers let me know how well I am doing.	3.63	1.07	15.4	26.3	58.0
28. Teachers return my work with written comments and ways to improve.	3.25	1.15	26.4	28.8	44.5
29. Teachers do their best to help you be responsible for your work.	3.61	1.09	14.8	24.5	60.4
30. This school provides opportunities for students to have fun.	3.51	1.13	16.8	29.1	54.0
31. Teachers try to make learning enjoyable.	3.56	1.09	14.2	29.0	56.5
Ownership					
32. I have enough say in deciding <u>what</u> I should learn.	2.75	1.24	43.0	28.6	28.2
33. I have enough say in deciding <u>how</u> I should learn.	2.89	1.25	38.2	29.1	32.7
Future Orientation					
34. What I am learning in school is important to me.	3.77	1.08	10.6	25.9	63.3
35. Things that I learn in school are useful to me now.	3.62	1.02	11.8	32.0	55.9
36. I believe this school prepares students to be successful in the future.	3.86	.99	8.7	21.4	69.8
Peer Support and Esprit					
37. Students help each other succeed in school.	3.40	1.19	21.9	26.1	51.9

FACTOR/ITEM	Mean	S.D.	% Disagree	% Uncertain	% Agree
38. Students in this school treat other students with respect.	2.72	1.16	40.8	33.3	25.6
39. I look forward to coming to school each day.	2.92	1.30	37.0	26.6	36.1
40. I am proud of this school.	3.34	1.23	20.7	31.5	47.7
41. I feel safe in this school.	3.42	1.22	22.5	23.4	54.0
Efficacy					
42. If I study and work hard, I will be successful in school.	4.27	.90	3.9	12.3	83.6
43. If I study and work hard, it will make a difference in my life.	4.34	.89	4.3	11.1	84.3
Other Related Items					
44. Teachers give too much homework.	3.59	1.29	19.3	25.4	55.1
45. I have friends in this school.	4.45	.88	3.1	9.6	87.0
46. There are things that happen in my life outside of school that make it hard for me to learn in school.	2.87	1.41	43.2	20.3	36.3

Table E.2. Student Engagement item means, standard deviations, and percents of disagree, uncertain, and agree for Jamestown Middle School.

FACTOR/ITEM	Mean	S.D.	% Disagree	% Uncertain	% Agree
Engagement					
1. I do my best to learn in school.	4.24	.75	1.9	13.1	85.0
2. I concentrate on what is being taught during class.	3.74	.72	2.6	26.9	70.3
3. I complete school assignments on time.	4.18	.95	5.3	19.2	75.3
4. I do my school work to learn.	3.82	.99	8.8	21.7	69.2
5. I take pride in doing my school work.	3.35	1.12	19.3	32.7	47.7
Membership					
6. The purpose of this school is to help students learn.	4.20	1.01	6.2	13.3	80.4
7. Teachers treat students fairly.	2.96	1.23	34.8	29.1	35.9
8. The school principal(s) treat students fairly.	3.18	1.38	30.3	20.9	48.5
9. Adults in this school listen to the student's side of the story.	2.83	1.14	35.2	38.0	26.8
10. The school provides enough opportunities for me to participate in clubs, sports, music, etc.	3.95	1.14	13.3	13.0	73.4
11. Teachers will help me when I am having problems in class or with an assignment.	3.77	1.02	11.1	21.7	67.0
12. Teachers and other adults in this school will help you deal with home or personal problems.	3.28	1.21	24.3	31.6	43.8
13. The counselors in this school are helpful.	3.62	1.20	14.2	30.4	55.1
14. I understand the school rules.	4.09	1.01	8.4	13.5	77.9
15. The rules in the school are fair.	3.19	1.19	25.1	28.3	46.4
16. Rules are enforced fairly in this school.	3.13	1.23	29.0	29.0	41.7
17. Teachers treat me with respect.	3.39	1.17	19.2	27.4	53.2
18. My teachers care about me.	3.16	1.18	25.0	33.1	41.7
19. In this school you are treated like you are important.	2.97	1.18	32.3	31.6	35.8

FACTOR/ITEM	Mean	S.D.	% Disagree	% Uncertain	% Agree
Authentic Work					
20. Teachers reward you for giving your best effort.	3.20	1.14	24.2	34.7	40.8
21. I am praised in class when I do something well.	3.00	1.15	30.1	35.7	34.0
22. This school recognizes and rewards student accomplishments.	3.96	1.02	8.7	18.5	72.6
23. In this school the grades students receive are based on how well they perform.	3.96	1.01	7.4	21.1	71.2
24. What I am learning in school is interesting.	3.01	.96	24.1	46.5	29.2
25. Teachers make learning interesting.	2.87	1.07	31.0	42.7	26.0
26. There are enough opportunities for students to work together in this school.	3.06	1.14	32.0	27.8	37.9
27. Teachers let me know how well I am doing.	3.60	1.03	14.1	28.6	57.0
28. Teachers return my work with written comments and ways to improve.	2.90	1.21	35.0	31.6	33.1
29. Teachers do their best to help you be responsible for your work.	3.40	1.07	17.8	33.5	48.5
30. This school provides opportunities for students to have fun.	3.14	1.26	28.5	29.0	42.4
31. Teachers try to make learning enjoyable.	3.13	1.04	26.6	34.1	39.0
Ownership					
32. I have enough say in deciding <u>what</u> I should learn.	2.24	1.18	62.3	21.3	16.2
33. I have enough say in deciding <u>how</u> I should learn.	2.51	1.23	51.5	25.4	23.0
Future Orientation					
34. What I am learning in school is important to me.	3.80	1.01	10.4	23.6	65.8
35. Things that I learn in school are useful to me now.	3.53	1.13	16.0	31.4	52.5
36. I believe this school prepares students to be successful in the future.	3.66	1.05	11.1	31.4	57.3
Peer Support and Esprit					
37. Students help each other succeed in school.	3.11	1.12	27.0	34.0	38.9

FACTOR/ITEM	Mean	S.D.	% Disagree	% Uncertain	% Agree
38. Students in this school treat other students with respect.	2.43	1.18	52.6	29.2	17.9
39. I look forward to coming to school each day.	2.71	1.31	41.5	30.0	28.3
40. I am proud of this school.	2.96	1.16	29.5	37.4	33.0
41. I feel safe in this school.	3.12	1.29	28.9	30.2	40.6
Efficacy					
42. If I study and work hard, I will be successful in school.	4.36	.80	1.8	12.4	85.6
43. If I study and work hard, it will make a difference in my life.	4.34	.89	4.2	10.4	85.3
Other Related Items					
44. Teachers give too much homework.	3.52	1.30	20.3	32.7	46.8
45. I have friends in this school.	4.62	.85	3.8	4.7	91.4
46. There are things that happen in my life outside of school that make it hard for me to learn in school.	2.97	1.47	40.2	19.1	40.6

Table E.3. Teacher Engagement item means, standard deviations, and numbers of disagree, uncertain, and agree for Morristown Middle School.

ITEM	Mean	S.D.	# Disagree	# Uncertain	# Agree
1. An adequate work space where I can concentrate is available.	4.22	1.00	3	0	20
2. The amount of student tardiness and class cutting in this school interferes with my teaching.	2.50	1.14	13	4	5
3. I worry about my personal safety while in school.	1.61	.72	20	3	0
4. My professional workload is fair and reasonable.	4.09	.85	1	4	18
5. I try to avoid getting involved in students' personal concerns.	2.78	1.17	10	7	6
6. I frequently take on extra tasks or responsibilities that I think will benefit the school.	4.18	.85	1	3	18
7. My success or failure in teaching students is due primarily to factors beyond my control rather than to my own effort and ability.	2.39	1.34	14	2	7
8. The level of student misbehavior (e.g., noise, horseplay or fighting in the halls, cafeteria or student lounge) and/or drug or alcohol use in this school interferes with my teaching.	2.86	1.11	9	5	9
9. Many of the students I teach are not capable of learning the material I am supposed to teach them.	2.17	.94	17	3	3
10. Necessary materials (e.g., textbooks, supplies, copy machines) are readily available as needed by the staff.	4.26	.81	1	2	20
11. I wouldn't want to work in any other school.	3.26	1.05	5	9	9
12. The reputation and performance of this school is important to me.	4.44	.51	0	0	23
13. I sometimes feel it is a waste of time to try to do my best as a teacher.	1.44	.73	20	3	0
14. I try very hard to show my students that I care about them.	4.57	.90	1	0	22
15. Students who work hard and do well deserve more of my time than those who do not.	2.17	.94	17	3	3

ITEM	Mean	S.D.	# Disagree	# Uncertain	# Agree
16. It's important for me to know something about my students' families.	4.11	.71	0	5	18
17. I try to make myself accessible to students even if it means meeting with them before or after school, during my prep or free period, etc.	4.39	.58	0	1	22
18. If I had to choose, I would emphasize learning subject matter content over personal growth for my students.	2.04	.71	17	6	0
19. It is important that as teachers we try to insure that all students master basic skills and subject matter course work.	3.83	1.03	4	2	17
20. I am always thinking about ways of improving my courses.	4.57	.59	0	1	22
21. It is possible to successfully teach my subject without being an expert in the field.	3.48	1.08	6	1	16
22. My expectations about how much students should learn are not as high as they used to be.	2.30	1.06	14	5	4
23. Interdisciplinary classes benefit teachers as well as students.	4.00	.95	2	4	17
24. Given the opportunity, I would take additional college or university courses in the subject area I teach most often.	4.22	.67	0	3	20
25. If I could do it over, I would much rather teach another subject than the one I teach now.	1.59	.67	20	2	0
26. The attitudes and habits my students bring to class greatly reduce their chances for academic success.	3.39	1.12	6	4	13
27. This school seems like a big family; everyone is so close and cordial.	2.78	1.05	9	7	7
28. Teachers in my school have enough authority to do the work that is expected of them.	4.18	.66	0	3	19
29. Staff members are recognized for a job well done.	3.87	.92	1	5	17

ITEM	Mean	S.D.	# Disagree	# Uncertain	# Agree
30. The school administration's behavior toward the staff is supportive and encouraging.	3.91	1.00	2	3	18
31. Staff members support and encourage each other.	4.00	.67	1	2	20
32. I feel accepted and respected as a colleague by most staff members.	4.22	.42	0	0	23
33. Most of the inservice programs I attended the past school year (92/93) dealt with issues specific to the needs and concerns of this school's students and staff.	3.18	1.18	5	7	10
34. The principal is interested in innovation and new ideas.	4.39	.66	0	2	21
35. Teachers in this school are continually learning and seeking new ideas.	4.35	.57	0	1	22
36. Staff development programs in this school permit me to acquire important new knowledge and skills.	3.26	1.05	5	6	12
37. I have an opportunity to develop my special abilities.	3.74	.86	2	3	18
38. I rarely find my job challenging.	1.83	.72	21	1	1
39. In this school I am seldom encouraged to experiment with my teaching.	1.91	.95	21	0	2
40. The same small group of people sits on most of the active committees and is involved in most of the new projects and programs here.	2.87	1.01	7	9	6
41. Too often, decisions made by staff committees are ignored or reversedby building administrators.	2.44	.99	12	9	2
42. Too often, decisions made by building staff are ignored or reversed by central office administrators.	2.30	.82	13	9	1
43. I make a conscious effort to coordinate the content of my courses with other teachers.	3.83	.89	2	5	16
44. We solve problems; we don't just talk about them.	3.83	.78	1	6	16

ITEM	Mean	S.D.	# Disagree	# Uncertain	# Agree
45. I support the disciplinary standards and practices of this school.	4.00	1.04	3	0	20
46. This school promotes social and/or moral values I think are important.	4.04	.48	0	2	21
47. The way I conduct my classes is consistent with the educational goals and objectives of my school.	4.30	.56	0	1	22
48. Most of my colleagues share my beliefs and values about what the central mission of this school should be.	4.13	.63	0	3	20
49. The principal of this school treats teachers as professional workers.	4.50	.93	1	1	22
50. The principal of this school gives teachers the feeling that their work is an "important" activity.	4.22	1.00	1	3	19

Table E.4. Teacher Engagement item means, standard deviations, and numbers of disagree, uncertain, and agree for Jamestown Middle School.

ITEM	Mean	S.D.	# Disagree	# Uncertain	# Agree
1. An adequate work space where I can concentrate is available.	4.03	.94	2	3	24
2. The amount of student tardiness and class cutting in this school interferes with my teaching.	2.89	.96	13	4	5
3. I worry about my personal safety while in school.	1.79	1.01	24	3	2
4. My professional workload is fair and reasonable.	3.62	1.12	1	4	18
5. I try to avoid getting involved in students' personal concerns.	2.48	.87	14	12	3
6. I frequently take on extra tasks or responsibilities that I think will benefit the school.	3.93	.84	2	5	22
7. My success or failure in teaching students is due primarily to factors beyond my control rather than to my own effort and ability.	2.52	1.21	17	5	7
8. The level of student misbehavior (e.g., noise, horseplay or fighting in the halls, cafeteria or student lounge) and/or drug or alcohol use in this school interferes with my teaching.	2.62	.94	19	3	7
9. Many of the students I teach are not capable of learning the material I am supposed to teach them.	2.03	1.02	26	0	3
10. Necessary materials (e.g., textbooks, supplies, copy machines) are readily available as needed by the staff.	3.79	.94	5	1	23
11. I wouldn't want to work in any other school.	3.15	1.03	5	14	8
12. The reputation and performance of this school is important to me.	4.24	.79	1	0	28
13. I sometimes feel it is a waste of time to try to do my best as a teacher.	2.48	1.21	18	4	7
14. I try very hard to show my students that I care about them.	4.21	.82	1	4	24

ITEM	Mean	S.D.	# Disagree	# Uncertain	# Agree
15. Students who work hard and do well deserve more of my time than those who do not.	2.89	1.11	12	9	8
16. It's important for me to know something about my students' families.	3.69	.66	2	6	21
17. I try to make myself accessible to students even if it means meeting with them before or after school, during my prep or free period, etc.	4.03	.87	3	1	25
18. If I had to choose, I would emphasize learning subject matter content over personal growth for my students.	2.68	.82	12	13	3
19. It is important that as teachers we try to insure that all students master basic skills and subject matter course work.	3.79	.86	3	5	21
20. I am always thinking about ways of improving my courses.	4.38	.56	0	1	28
21. It is possible to successfully teach my subject without being an expert in the field.	3.16	1.23	12	1	15
22. My expectations about how much students should learn are not as high as they used to be.	2.96	1.45	13	1	14
23. Interdisciplinary classes benefit teachers as well as students.	3.70	.87	3	6	18
24. Given the opportunity, I would take additional college or university courses in the subject area I teach most often.	3.90	.72	1	6	22
25. If I could do it over, I would much rather teach another subject than the one I teach now.	2.21	1.15	19	7	3
26. The attitudes and habits my students bring to class greatly reduce their chances for academic success.	3.59	1.09	6	7	16
27. This school seems like a big family; everyone is so close and cordial.	2.90	1.05	10	10	9
28. Teachers in my school have enough authority to do the work that is expected of them.	3.45	1.02	7	3	19
29. Staff members are recognized for a job well done.	3.00	.89	9	10	10

ITEM	Mean	S.D.	# Disagree	# Uncertain	# Agree
30. The school administration's behavior toward the staff is supportive and encouraging.	3.62	1.05	5	5	19
31. Staff members support and encourage each other.	3.64	.68	2	7	19
32. I feel accepted and respected as a colleague by most staff members.	3.97	.68	1	4	24
33. Most of the inservice programs I attended the past school year (92/93) dealt with issues specific to the needs and concerns of this school's students and staff.	2.81	1.11	11	9	7
34. The principal is interested in innovation and new ideas.	4.07	.59	0	4	25
35. Teachers in this school are continually learning and seeking new ideas.	4.07	.59	4	6	19
36. Staff development programs in this school permit me to acquire important new knowledge and skills.	3.00	.86	7	14	7
37. I have an opportunity to develop my special abilities.	3.45	.87	5	8	16
38. I rarely find my job challenging.	1.86	.88	25	0	4
39. In this school I am seldom encouraged to experiment with my teaching.	2.55	.78	16	9	4
40. The same small group of people sits on most of the active committees and is involved in most of the new projects and programs here.	3.00	1.04	11	5	11
41. Too often, decisions made by staff committees are ignored or reversedby building administrators.	2.71	.90	14	10	4
42. Too often, decisions made by building staff are ignored or reversed by central office administrators.	3.07	.94	9	10	9
43. I make a conscious effort to coordinate the content of my courses with other teachers.	3.10	.98	11	5	13
44. We solve problems; we don't just talk about them.	2.97	1.12	12	6	11

ITEM	Mean	S.D.	# Disagree	# Uncertain	# Agree
45. I support the disciplinary standards and practices of this school.	3.86	.89	3	4	21
46. This school promotes social and/or moral values I think are important.	3.83	.71	2	4	23
47. The way I conduct my classes is consistent with the educational goals and objectives of my school.	4.28	.46	0	0	29
48. Most of my colleagues share my beliefs and values about what the central mission of this school should be.	3.69	.71	2	7	20
49. The principal of this school treats teachers as professional workers.	3.14	.79	1	1	27
50. The principal of this school gives teachers the feeling that their work is an "important" activity.	4.11	.86	1	3	25

Table E.5 Teacher Readiness item means, standard deviations, and numbers of disagree, uncertain, and agree for Morristown Middle School.

FACTOR/ITEM	Mean	S.D.	# Disagree	# Uncertain	# Agree
CAPACITY					
Preparedness					
1. I know the life circumstances that put students at risk.	4.04	.71	1	2	20
2. I can recognize the life circumstances that put students at risk.	4.17	.49	0	1	22
3. I know behaviors students choose that put them at risk.	4.26	.62	0	2	21
4. I can recognize student behaviors that put them at risk.	4.22	.60	0	2	21
5. I know how to help students overcome the life home situations that put them at risk.	2.83	.94	11	6	6
6. I know how to effectively teach at-risk students.	3.30	.97	6	6	11
7. The training and preparation I received prepared me to deal with students who have low motivation or history of behavior problems in school.	2.41	1.10	13	4	5
Problem Acceptance					
8. The number of students with characteristics that impede learning has increased over the past five or ten years.	4.52	.60	0	1	20
9. Students at risk of school failure or limited life opportunities due to undereducation is a major national problem.	4.35	.65	0	2	21
10. The long-term cost of students dropping out of school far exceeds the cost of meeting the students' current needs so that they can continue their educations.	4.39	1.03	1	3	19
11. Students at risk of school failure or limited life opportunities due to undereducation is a problem in our district.	3.75	.89	4	4	15
WILL					
Responsibility Acceptance					
12. It is my obligation to help every one of my students achieve.	4.70	.64	0	2	21

FACTOR/ITEM	Mean	S.D.	# Disagree	# Uncertain	# Agree
13. I need to do more to address the needs of students at risk.	3.91	.85	2	3	18
14. It is part of my responsibility to keep students from dropping out of school.	4.48	.67	0	2	21
15. I can be counted on to help students achieve, even though it may not be part of my official assignment, increases my workload, or causes me inconvenience .	4.30	.64	0	2	19
16. I need to change my professional practices as the needs of students in my school change.	4.17	1.07	2	2	19
Willingness to Change					
17. I am willing to collaborate with administrators and other teachers to make changes where necessary to better meet the educational needs of students.	4.61	.50	0	0	23
18. I am willing to learn more about what puts students at risk of school failure or undereducation.	4.52	.51	0	0	23
19. I am willing to learn more about teaching strategies and approaches and make changes where necessary to better meet the educational needs of students.	4.48	.51	0	0	23
20. I am willing to examine my teaching methods and make changes where necessary to better meet the educational needs of students.	4.48	.59	0	1	22
21. I am willing to examine course content and make changes where necessary to better meet the educational needs of students.	4.44	.66	0	2	21
22. I am willing to individualize instruction to better meet the educational needs of students.	4.39	.58	0	1	22
23. I am willing to examine assignments I give and make changes where necessary to better meet the educational needs of students.	4.48	.60	0	1	20
24. I am willing to learn more about parental and community involvement and make changes to help meet the educational needs of students.	4.48	.51	0	0	23

FACTOR/ITEM	Mean	S.D.	# Disagree	# Uncertain	# Agree
Student Potential Orientation					
25. Educating all students should be a primary focus of the district.	4.70	.47	0	0	23
26. I assume every student is capable of learning, given appropriate conditions.	4.61	.50	0	0	23
27. I want to have students at risk remain in my classes rather than suspending them or sending them to another program so that I can help them increase their achievement.	4.22	.85	1	3	19
28. When it comes right down to it, a teacher can't do much because a student's motivation and performance depends primarily on his/her home situation.	3.83	1.03	4	2	17
29. Teachers can help most students overcome the home life circumstances that put them at risk.	3.22	.95	6	8	9
EFFICACY					
30. I am certain that I can make a difference in the lives of my students.	4.30	.64	0	2	21
31. If I make a sincere effort, I can get through to even the most difficult or unmotivated students.	3.52	.85	3	7	13
32. I have confidence in myself as a teacher when my students have low motivation or have a history of behavior problems.	3.83	.98	3	4	16
33. I am effective in persuading students that they can be successful in school.	4.00	.67	0	5	18

Table E.6. Teacher Readiness item means, standard deviations, and numbers of disagree, uncertain, and agree for Jamestown Middle School.

FACTOR/ITEM	Mean	S.D.	# Disagree	# Uncertain	# Agree
CAPACITY					
Preparedness					
1. I know the life circumstances that put students at risk.	3.88	.73	2	4	23
2. I can recognize the life circumstances that put students at risk.	3.71	.75	2	8	19
3. I know behaviors students choose that put them at risk.	3.81	.81	3	4	22
4. I can recognize student behaviors that put them at risk.	3.91	.71	2	3	24
5. I know how to help students overcome the life home situations that put them at risk.	2.47	.80	17	9	3
6. I know how to effectively teach at-risk students.	3.05	.91	10	9	10
7. The training and preparation I received prepared me to deal with students who have low motivation or history of behavior problems in school.	2.41	1.10	19	5	6
Problem Acceptance					
8. The number of students with characteristics that impede learning has increased over the past five or ten years.	4.28	1.07	2	4	23
9. Students at risk of school failure or limited life opportunities due to undereducation is a major national problem.	4.09	.87	1	4	24
10. The long-term cost of students dropping out of school far exceeds the cost of meeting the students' current needs so that they can continue their educations.	3.86	1.21	4	4	20
11. Students at risk of school failure or limited life opportunities due to undereducation is a problem in our district.	3.75	.89	3	3	22
WILL					
Responsibility Acceptance					
12. It is my obligation to help every one of my students achieve.	3.97	.948	3	2	24

FACTOR/ITEM	Mean	S.D.	# Disagree	# Uncertain	# Agree
13. I need to do more to address the needs of students at risk.	3.46	.83	4	9	15
14. It is part of my responsibility to keep students from dropping out of school.	3.79	.92	4	3	21
15. I can be counted on to help students achieve, even though it may not be part of my official assignment, increases my workload, or causes me inconvenience .	3.86	.80	1	5	22
16. I need to change my professional practices as the needs of students in my school change.	3.86	.92	3	2	24
Willingness to Change					
17. I am willing to collaborate with administrators and other teachers to make changes where necessary to better meet the educational needs of students.	4.21	.42	0	0	28
18. I am willing to learn more about what puts students at risk of school failure or undereducation.	3.71	.81	3	5	20
19. I am willing to learn more about teaching strategies and approaches and make changes where necessary to better meet the educational needs of students.	4.11	.42	0	1	27
20. I am willing to examine my teaching methods and make changes where necessary to better meet the educational needs of students.	4.18	.39	0	0	28
21. I am willing to examine course content and make changes where necessary to better meet the educational needs of students.	4.11	.50	0	2	26
22. I am willing to individualize instruction to better meet the educational needs of students.	3.64	.87	3	5	20
23. I am willing to examine assignments I give and make changes where necessary to better meet the educational needs of students.	3.93	.66	2	1	25
24. I am willing to learn more about parental and community involvement and make changes to help meet the educational needs of students.	3.75	.52	1	5	22

FACTOR/ITEM	Mean	S.D.	# Disagree	# Uncertain	# Agree
Student Potential Orientation					
25. Educating all students should be a primary focus of the district.	4.00	.94	3	3	22
26. I assume every student is capable of learning, given appropriate conditions.	4.21	.83	1	4	23
27. I want to have students at risk remain in my classes rather than suspending them or sending them to another program so that I can help them increase their achievement.	3.33	1.00	7	7	13
28. When it comes right down to it, a teacher can't do much because a student's motivation and performance depends primarily on his/her home situation.	3.07	.94	9	10	9
29. Teachers can help most students overcome the home life circumstances that put them at risk.	2.59	.91	12	12	4
EFFICACY					
30. I am certain that I can make a difference in the lives of my students.	3.61	.79	3	7	18
31. If I make a sincere effort, I can get through to even the most difficult or unmotivated students.	2.79	1.00	13	9	6
32. I have confidence in myself as a teacher when my students have low motivation or have a history of behavior problems.	3.21	.96	8	8	12
33. I am effective in persuading students that they can be successful in school.	3.46	.88	3	10	15